

MAP OF INDIA: DISTRIBUTION OF MAIN CROPS
Showing the main agricultural products

AGRICULTURAL MARKETING IN NORTHERN INDIA

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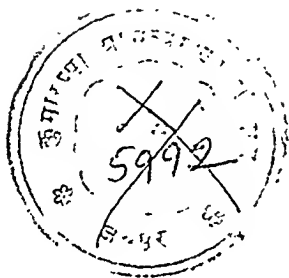
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TO THE SACRED
MEMORY OF MY PARENTS



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PREFACE

OWING to the War and the post-War world conditions, the equilibrium between the supply of and the demand for agricultural commodities was disturbed, contributing to the fall in prices and the accumulation of stocks in the chief exporting countries. The changed situation forced the Governments of the various countries to regulate imports and the marketing of agricultural products.

India, a predominantly agricultural country, was severely affected by the world depression. Agriculture forms the profession of two-thirds of her population; and the proportion has not changed in favour of industrial employment. Industrial development has taken place, but a larger percentage of the people has not been absorbed. Therefore one concludes that India will not become industrialized in the Western sense of the word in the near future, and that she will remain mainly agricultural. It is obviously the duty of the State to help to improve the efficiency of the production and distribution of farm products.

Along with backward cultivation, Indian agriculture is greatly handicapped by the unorganized nature of the marketing operations. In order to study conditions on the spot and to collect first-hand information, I toured through various provinces of India and watched the working of the prominent produce markets; I also prepared a questionnaire and obtained, through personal interviews, answers from the representatives of various interests (*vide* Appendix A). This book attempts a critical examination of contemporary marketing methods and practices, pointing out the existing defects and suggesting suitable remedies.

The book has been divided into three parts: the first aims at giving a general introduction to the subject of marketing and world agricultural conditions, whilst the discussion of Indian economic structure and of the developments in her marketing system is intended to supply data for what follows. The second part is mainly devoted to the working of the marketing machinery as it is found at present. The last part is almost entirely recom-

mendatory. Although I have dealt principally with the staple agricultural commodities—viz. wheat, rice, sugar-cane, oilseeds, cotton, and jute—of Northern India (Punjab, United Provinces, Bihar, and Bengal), I have made references to other products and to the rest of the country as occasion demanded. And I presume that I am right in saying that, to a great extent, what is applicable to the part is also applicable to the whole.

Now I come to the most pleasant part of my work. My gratitude is due to Dr. Vera Anstey, D.SC.(ECON.), of the London School of Economics and Political Science, for her valuable guidance and inspiring criticisms. I am sincerely thankful to her for giving me ungrudgingly of her time, and for patiently reading my chapters. I am greatly obliged to Sir Harry Lindsay, K.C.I.E., C.B.E., for writing a Foreword to my book. In spite of being very busy, he was kind enough to accede to my request. I am deeply grateful to Sir Atul C. Chatterjee, G.C.I.E., K.C.S.I., and to Mr. W. H. Moreland, C.S.I., C.I.E., for their unfailing interest in my work throughout the period of my stay in England. I acknowledge my indebtedness to my esteemed friends and colleagues, Professor Radha Kamal Mukherjee, M.A., PH.D., Mr. B. N. Chatterjee, M.A., B.L., Dr. M. Wahid Mirza, M.A., PH.D., and Dr. D. Pant, B.COM., PH.D., of the University of Lucknow, for many useful suggestions made both in the course of my enquiries in India and afterwards. I tender my thanks to Mr. J. K. Montgomery, Chief of the Section in the Bureau of Economic and Social Studies, International Institute of Agriculture, Rome, for the help he gave to me during my visit to the Institute. I take this opportunity also of thanking all my hosts and helpers for the hospitality and kindness I received from them during my tours. I am happy to record my obligations to the efficient staffs of the libraries of the School of Economics, the Office of the High Commissioner for India, and the Horace Plunkett Foundation. They have been extremely courteous and of great assistance to me.

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THE UNIVERSITY
LUCKNOW

January 1937

FOREWORD

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To generalize on the agricultural progress of a country so large as India is a task which demands not only enthusiasm, sympathy, and courage, but also great powers of observation backed by a clear intellect and judgment. In other words, the qualities of head and heart must be well balanced; neither must be allowed to outweigh the other. These are gifts which Mr. Husain possesses to no small degree, and he has devoted them unsparingly to the task before him. He has, moreover, had the sense to concentrate on agricultural conditions in Northern India, which he knows best, and thus to avoid generalizations which would lose value if they embraced too wide an area.

For, indeed, there is no short cut to a solution of the problems which Mr. Husain has seen so clearly and described so vividly. We are apt to get impatient with what we are pleased to call "vicious" circles; but is the abusive epithet really justified? We long to break into the circle and violently turn it up at the point which leads most directly to prosperity. But should we be really justified in doing so? Would not progress in the end be retarded? Does not the promise of prosperity depend on the unbroken roundness of the circle, all points of which must progress together if prosperity is to be assured on the soundest and most enduring lines?

What is the circle before us? Does not prosperity depend on efficiency, and efficiency on co-operation? Does not the capacity for co-operation depend on the imagination to realize your neighbour's point of view and the humility to accept it, so that the majority may rise even at the expense of the minority, the average at that of the individual? And do not imagination and humility depend on education, which alone can, in any true sense, turn a man's thoughts outwards from his own immediate advantages

to the lasting advantage of his neighbours? And does not education depend on savings, and savings on prosperity, and prosperity on efficiency?

So here we are back at the "beginning" of the circle again. It is a circle the outline of which is dictated by the conditions of human life. It is stupid to call it "vicious." It is criminal to try to "break" it. It must be raised at all points simultaneously, by individual efforts collectively guided and controlled.

This, to my mind, is the most satisfactory feature of Mr. Husain's survey and conclusions. He sees the picture as a whole, and the interdependence of the several parts. He is impatient enough to long for an appreciable advance forward, and yet patient enough to realize that the advance must be individualistic as well as co-operative and collective. He realizes the efforts which have already been made, especially since the War, and the need for still further efforts; and he recognizes particularly the valuable lead which has been given by the Royal Commission on Agriculture and by the Imperial Council of Agricultural Research. In the light which it throws on the direction and force of these further efforts, Mr. Husain's book is of real value.

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PART I

INTRODUCTORY

CHAPTER I

APPROACH TO MARKETING PROBLEMS

AGRICULTURE has always been the principal industry in the world: " . . . agriculture is the occupation of the majority of workers throughout the world; its various products represent in value the greater part of human labour, and the exchange of its products against industrial products forms indeed the basis of world trade."¹ The accompanying table will be found helpful in realizing the importance of the agricultural population of the world.

*Estimated Agricultural Populations in 1930**

Countries	Total Population (in millions)	Agricultural Population	
		(in millions)	Percentage to Total
1. Europe (excluding Russia) ..	379	139	36·7
2. Russia	161	140	87·0
3. North America	134	31	23·1
4. South and Central America	117	76	65·0
5. Africa	142	107	75·4
6. Asia	1,070	805	75·2
7. Oceania	10	3	30·0
Total	2,013	1,301	64·6

* *World Agriculture (an International Survey)*. A Report by a Study Group of members of the Royal Institute of International Affairs, London, 1932.

On the continent of Asia, for example, barring Japan, industrialization is still in its infancy. Japan is highly industrialized, but it is a small country, and from the point of view of population does not compare with the other countries of Asia. China is essentially an agricultural country. India, again, is primarily agricultural.

¹ *Report of the World Economic Conference.*

She has got many industries, and more are being started every day, but she cannot be called an industrial country. More than two-thirds, i.e. 67 per cent, of her population directly depend on agriculture. Of the remaining, about half—16·7 per cent—only are engaged in different industries and trade, and 16·3 per cent are employed in various services. The rest of Asia is almost wholly agricultural, except for the petroleum industry of Burma, Iran, and Mesopotamia. In Europe, England and Germany are pre-eminently industrial countries; but agriculture is quite important, particularly in the latter. And attempts are being continuously made in England as well to keep agriculture in a flourishing condition. The other countries of Europe are predominantly agricultural, though they have well-developed industries too. Protection and assistance are extended to agriculture and industries alike. With the exception of some industries in South Africa, the whole of Africa is mainly agricultural.

The United States of America, one of the most highly industrialized countries of the world, leads in agriculture also. The use of machine ploughs, tractors, harvesters, etc., for production purposes has made both intensive and extensive agriculture possible. Practically the whole of the New World—specifically Canada, Brazil, and Argentina—has taken to large-scale agriculture in a manner unknown in the Old World. Australia and New Zealand, again, are developing their agriculture through large-scale farming. Important industries are being set up, but agriculture is receiving due attention, and is maintaining its position as the primary industry. The reason why these countries have adopted and have succeeded in carrying on large-scale agriculture is that they have been colonized at a relatively late date. The fresh settlers could get as much land as they liked, and they started large farms where, later on, the mechanized agricultural implements could be used with advantage. The soil, too, was more or less virgin and capable of high yield. Small efforts, with the help of nature, resulted in bumper crops. In the older countries—on the continents of Europe and Asia, and in North Africa—the agricultural holdings are generally so small that cultivation by mechanized means is not

possible, or, at least, not profitable. Large-scale production as a rule results in lower costs per unit, and this in turn leads to lower prices. This is the main factor responsible for making the newer countries the granaries of the world. Huge surplus produce and low costs enable the American countries and Australia to supply grain to any part of the world at competitive prices.

The Union of Socialist Soviet Republics is the only country in the Old World where cultivation is being carried on as a large-scale enterprise. It has revolutionized its agricultural system just as it has upset the old order in government, in religion, in social manners and customs, and in industry. Moreover, it is the only country in the whole world where the entire national system of agriculture is carefully planned out beforehand, and then put into operation as one scheme. This is achieved through the collectivization of agriculture. The work is divided up between the State, Co-operative and Collective Farms and Communes. "The fundamental aim of the [First Five-Year] Plan was to lay the foundations of the establishment of a classless Socialist society in the U.S.S.R. by (1) the development of a large-scale industry both of producers' [means of production] and consumers' goods; (2) the introduction of large-scale agriculture based on modern technique; (3) raising enormously the cultural level of the country."¹ Thus agriculture has been put in the forefront of the Soviet economic programme. Some idea of the immense achievements of the First Plan can be formed when we learn that Special Machine Tractor Stations were organized, which in 1932 numbered 2,446, to supply agricultural machinery and skilled scientific assistance to the collective farms. And the total number of State farms increased from 3,125, cultivating 1,735,000 hectares in 1928, to 10,203, cultivating 13,557,000 hectares in 1935. "... in general, it may be said that, in the course of the First Five-Year Plan, large-scale collective farming became the prevalent and dominant form of agriculture in the Soviet Union, that the U.S.S.R. had become a country of the largest scale farming in the world, and

¹ *The Second Five-Year Plan*, by W. P. Coates and Zelda Coates, 1934, p. 4.

that collective farms in all branches of agriculture have now undoubtedly come to stay in the U.S.S.R."¹ The objects of the Second Five-Year Plan with reference to the improvement of agriculture were "to transform grain, live-stock breeding, sugar-beet, cotton, and other State farms into model agricultural undertakings by a thorough mastery of the technique of modern complex machinery; by introducing correct crop rotation, and organizing the work of seed selection, etc.; by improving the breeds of cattle, by raising the quality of grain, etc.; by using machinery, power, etc."²

As a result of these developments in various countries, cultivation has been placed on a more scientific basis. The increasing adoption of modern and more efficient implements and agricultural machinery, the judicious use of suitable manures and fertilizers, the popularity of improved seeds, and the provision of irrigation facilities and the regular supply of water have ushered in an era of rationalization of agriculture. Research stations have been established by different countries to carry on experiments in the many branches of agriculture. Similarly, the breed and vitality of the live-stock are being improved through cross-breeding and better feeding. In the midst of these activities the world economic crisis set in in 1929. In their many publications the League of Nations and the International Institute of Agriculture came to the conclusion that agricultural production had outstripped demand: this was regarded as one of the factors responsible for the depression. Unfortunately it is not possible to construct indices showing the trend of agricultural output as a whole in relation to population changes,³ and all that can be done is to take the figures for particular crops. Wheat may be taken as a typical case, as it forms the basis of greatest commercial activity among all farm products, and has, consequently, been hit the hardest. The following figures give the world production of wheat from the pre-War and post-War periods up to the beginning of the depression. It will be noticed that since 1925 the increase in the output of wheat works

¹ *The Second Five-Year Plan*, by W. P. Coates and Zelda Coates, 1934, p. 20.

² *Ibid.*, p. 80.

³ See Note at the end of the chapter.

out at a yearly rate of 18 per cent, while the world population increased by 14.4 per cent only, from 1,317,329,000 to 1,506,479,000 from 1913 to 1929 respectively. That is not all. World consumption per head decreased, as seen from the table given below. The consumption per head decreased by 1.2 kilo-

World Production of Wheat†*

Year	Millions of Quintals	Percentage
1909-13 (average) ..	1,029.6	100
1921-25 (average) ..	1,018.7	99
1926	1,182.3	115
1927	1,191.2	116
1928	1,280.9	124
1929	1,129.0	110
1930	1,276.7	124

* *The Agricultural Crisis* (League of Nations), 1931, vol. i, pp. 25-27.

† Including the U.S.S.R. but excluding China, for which estimates are extremely vague. Some other countries also have been eliminated to provide strictly comparable figures.

*Consumption of Wheat *†*

Countries (1)	Consumption per head (kilograms)		Total Consumption (Millions of Quintals)		
	1909-10 to 1913-14 (2)	1925-26 to 1929-30 (3)	Average 1909-10 to 1913-14 (4)	Average 1925-26 to 1929-30 (5)	Percentage (5) to (4)
Europe ..	129.9	128.7	449	474	105.5
U.S.A. ..	147.3	124.6	139	149	107.2
Argentina ..	170.6	149.1	12	16	133.3
Australia ..	160.3	146.0	8	9	112.5
India ..	23.6	23.7	74	79	106.8
Other countries	15.5	17.6	60	82	136.6
Total ..	65.9	63.2	764	828	108.4

* *The Agricultural Crisis*.

† Excluding the U.S.S.R., China, and Turkey, as also the quantities necessary for sowing; but including those employed for fodder and industrial purposes.

gram in Europe, remained about the same in India, and increased by 2·1 kilograms in "Other countries"; but it was markedly reduced in the New World, where a rise in the standard of life, involving a change-over from grain to meat, vegetables, fruits, and dairy products, was probably responsible for the tendency. In spite of an increase of 14·4 per cent in the population, the total world consumption of wheat increased only by 8·4 per cent. Here we find that two factors were contributing towards the overthrow of the prices of wheat—world production had increased at a faster pace than population, while consumption per head had actually decreased. Once the equilibrium between the supply and demand of such an important commodity was upset, reactions on other produce could not be avoided.

A similar tendency was disclosed by nearly all the principal cereals, the world production of which, and of potatoes, had undergone the following changes in comparison with the pre-War period.¹

(All figures in 000 quintals)

Cereals	1909-13	1925	1925-28	1929
Wheat*	822,645	906,768	965,875	917,920
Rye	261,293	259,380	235,466	255,268
Barley	289,754	301,992	312,552	356,657
Oats	521,200	547,220	538,937	548,183
Maize	1,046,067	1,142,721	1,091,230	1,086,208
Total	2,940,959	3,158,081	3,114,060	3,164,236
Potatoes	1,288,000	—	1,352,274	1,581,000
Rice (rough) ..	782,600	—	—	856,500

* The discrepancy between these figures and those quoted on p. 23 is mainly due to the fact that the I.I.A. did not take into account some countries the statistics of which were incomplete or doubtful.

Thus, with the exception of rye, the production of other food

¹ *The Agricultural Situation in 1929-30* (International Institute of Agriculture, Rome), 1931.

grains had gone up. The world consumption, on the other hand, had decreased.¹

Cereals				Kilograms per head		Diminution
				1909-13	1925-28	
Wheat	..	..	..	65.9	63.2	Per cent 4.1
Rye ..	..	..	..	20.6	15.9	22.8
Barley	..	..	..	25.7	21.7	15.6
Oats ..	..	..	..	42.0	37.6	10.5
Maize	..	..	..	88.0	82.1	6.7

There could be no mistaking the fact that the world dietary at that time was different from that of pre-War days. Many factors had been responsible for the eating of products containing concentrated nourishment rather than bulky foods.

While all these efforts have been made in the field of production, we notice that the distribution of agricultural produce to consumers has not until quite recently received an equal amount of attention. Before the War, hardly any country, with the exception of the United States of America, realized the importance of scientific and efficient marketing of agricultural produce. It is only since the twenties of the present century that serious attention has been given to that aspect of agricultural activities. A study of marketing in any country has, from its very nature, to be taken right up from the village or farm threshing-floor to the big terminal or export markets from where the produce is either exported or starts on the reverse journey, to be distributed among the consumers by the wholesale and retail dealers. "Strictly speaking, marketing includes the farmer's transactions both in buying and selling, but it is generally confined to the selling side of his business, and is used to cover 'all activities involved from the time the product leaves the producer until it reaches the

¹ *The Agricultural Situation in 1929-30* (International Institute of Agriculture, Rome), 1931.

consumer.'"¹ The economics of marketing must be approached primarily from the viewpoint of an entire trade or industry as related to the body of consumers. Hence the term "marketing" is used to include a number of functions and processes, the common object of all being the preparing of the produce for ultimate (distribution for) consumption. Cherington uses the term marketing as "Designed to cover the complex group of services involved in the distribution of merchandise from producer to consumer, excluding only those functions which involve alterations in the form of the commodity."² As we are dealing in this thesis with the marketing of agricultural products only, we exclude such commodities as tea, rubber, etc., where, although the raw produce has been obtained from agricultural land, plantations, or forests, nevertheless the finished products, as seen in the market, are essentially the results of manufacturing and industrial processes. These must be regarded as belonging to a different category.

Gradually changes of the utmost importance have been taking place in the distribution of produce to the consumers: these are most noticeable since the nineteen-twenties. Markets have increased in numbers, size, and complexity. The development of transport services has brought distant markets within easy reach. New commercial and trading classes have brought in their wake more minute division of labour, and have carried specialization many a step forward. New processes of handling and treating goods have been invented. Science is playing a greater part in the preparation of the agricultural commodities for the market. New demands have been created, and society has become specialized and complex. Marketing, from the idea of a simple exchange between producer—the seller—and consumer—the buyer—has become very advanced, scientific, and complicated. Instead of being just one process or act of selling (as the case was a few centuries back), it now combines many important functions and allied processes. No middle interest came between the cultivator of the soil and

¹ *Agricultural Economics*, by George O'Brien, 1929, p. 91.

² *Elements of Marketing*, pp. 1 and 2.

the consumer of the crop in a subsistence system of farming; but this does not hold good now. As soon as farming became commercialized, marketing functions became more extensive. The greater the progress and development in production, the more efficient and scientific should the system of marketing become. Both should move forward together.¹ But, in actual practice, the consumer's demand is very often ignored, thus resulting in losses to producers. In most cases of marketing, three parties are concerned—producer, middleman, and consumer. As the producer generally comes into contact with the middleman only, he is prone to get out of touch with the ultimate consumer for whom the products are meant. As a matter of fact, the consumer is the most important market factor. He is the market, and the satisfied consumer is the best market. Therefore producers cannot afford to neglect the demand; and, in order to improve the marketing situation, the farmer cannot do better than adjust his production to the demands of the market. To a large extent the marketing problem consists in producing the quantity and the quality which the consumer wants.

As a result of realizing the importance of the consumer, there is a tendency in certain quarters to suggest the "elimination of the middleman." The phrase is open to two constructions. If it is intended to mean doing away with the existing systems of middlemen and replacing them by cheaper and, if possible, more efficient institutions to perform the same or allied functions, there can be no quarrel with such an opinion. But there would be strong opposition if the intention is to put a stop to the specialized performance of the functions of the middlemen. It has been pointed out above that the producer has no direct contact with the consumer, i.e. the two do not come together and discuss terms

¹ "The close relation existing between the production process and the marketing process . . . indicates quite clearly that any solution of our marketing problem must take into consideration the production aspects of any given situation. . . . The major difficulties of a number of industries to-day are due to the fact that they are producing and trying to sell at a profit too many goods that are not wanted, and are not producing enough of the kind and quality that are wanted."—*Marketing Principles*, by Pyle, 1931, p. 17.

in person. In other words, the far more common form of contact, the indirect one, exists, where they effect their exchange with each other as principals, but do it more or less completely with the help of others serving as agents or intermediaries for them. Sometimes yet another type of relationship, which is known as artificial contact, brought about through the medium of advertising, is found between the producer and the consumer. We appreciate the desire to establish direct contact between them, but the remedy suggested is in most cases quite impracticable and unworkable. Certain disadvantages are obvious if middlemen are eliminated without their being replaced by other agencies to perform the same functions, and if all sales are direct from the producer to the consumer as is suggested by some enthusiasts without realizing all the implications.

In the first place, the farmer at present is not in touch with the distant customers. So that he may market his produce efficiently, he will have to learn many a thing about the market—its organization and conditions—and the part supply and demand play in the fixation of prices. This will mean making a start from the beginning, and no one can tell when he will be in a position to follow the market information intelligently. Much time will have to be allowed for his equipping himself to perform his new functions satisfactorily. Can one wait till then? is the question that naturally arises to our mind. Secondly, dealing in small units, the costs will be high. Packing, despatching, and transportation will be more expensive per unit. Thirdly, where articles are to be processed or stored before being sold, direct sales would not be possible, as each producer cannot afford the plant or space needed for the same.¹ Whatever form it might take, some sort of intermediary or agency is therefore necessary between the producer and consumer. Nomenclature is not of great importance, at least not at the present stage of our study. Since 1920 there has been a decided trend toward marketing goods in a direct line from producer to consumer. This movement has been to the disadvan-

¹ Cf. *Marketing Agricultural Products in the United States*, by Clarke and Weld, p. 18.

tage of certain members of the old orthodox organization. In many cases of the sale of equipment or of materials for manufacture, direct sale exists on a large scale. But in all such instances either the direct sale has been in non-agricultural goods where mass and large-scale production is being carried on, involving large amounts of capital, and providing all the necessary marketing processes and services, or some selling agency, e.g. the producers' union or federation, has arranged the sale and performed the marketing functions.

The different kinds of contacts that can exist between the producers and consumers have been discussed above. Marketing is, naturally, based on those contacts. But even in direct marketing, direct contact to the extent of discussing terms in person, and consequently meeting each other, does not now exist. Take the case of a manufacturer of cotton goods. The mill in Liverpool might be supplied with foreign cotton which can be sold to it in large quantities by the marketing associations of producers in the growing countries. This will be an example of direct marketing, but not of direct contact. The representatives of the producers (the sellers) in the United States, Egypt, or India will not have met the millowner in England. In this instance there is direct marketing, because the produce is being marketed by the growers through an organization of their own. If the marketing agency is owned, managed, and controlled by the producers themselves, it cannot be regarded as a foreign body. And, although such an institution might be performing a middleman's functions, it should not be placed on the same footing as an independent middleman. It would just be a department of the farmers' organization.

It is surprising to note the various stages in which marketing exists to-day in the different parts of the world. The United States of America, with the highly developed production system, had to provide appropriate marketing facilities which materialized by the erection of giant elevators for wheat, a system which also developed in Canada. The American Elevator Systems and the Canadian Wheat Pools collect and gather together the wheat grown in the country

and then dispose of it according to the demand. These institutions are generally worked on co-operative principles, and have not only been recognized but directly helped as well by the respective Governments during the recent world depression. For example, during the years 1929, 1930, and 1931, the Federal Government advanced loans and made efforts to stabilize the prices of wheat and cotton in the States. The Federal Farm Board (abolished in May 1933) was established in 1929 with a revolving credit of 500 million dollars, among other things, "to help farmers to organize into co-operative marketing associations, and to assist the co-operatives, through loans, to develop highly efficient merchandising organizations."¹ In Canada, the three Wheat Pools of the prairie provinces (Saskatchewan, Alberta, and Manitoba)—co-operative organizations again—represent the most specialized form of marketing. To give an idea of the magnitude of the operations of these concerns, one instance only may be mentioned here. ". . . the Saskatchewan elevator system remains the largest grain-handling co-operative in the world, owning and operating 1,067 country elevators with a capacity of 35,900,000 bushels, and operating five terminal elevators, four owned and one leased, with a combined capacity of 24,900,000 bushels."²

At the same time, in other parts of the world, less advanced, direct marketing in the true sense and with full direct contact can be found in practice. Such is the case in small and more or less self-sufficient groups of people who are still producing, primarily, for the sake of subsistence. There it is quite common for the consumers to buy their daily requirements—grain, vegetables and fruits, eggs and poultry, milk and its products, etc.—from the local producers without the intervention of any retailers or middlemen. This, a direct passing of goods between the original producer and the final consumer, represents the simplest form of marketing. And even the barter system is not unknown to-day, particularly among the most highly developed countries

¹ *Year-Book of Agricultural Co-operation*, 1934, p. 56.

² *Ibid.*

otherwise practising modern marketing methods. In August 1931 an agreement was signed in Washington for the exchange of 1,275,000 bags of Brazilian coffee for 25 million bushels of the wheat held by the, now defunct, American Federal Farm Board.¹ Again, in July 1932 an agreement for exchange of German coal against Brazilian coffee was concluded between a large Ruhr heavy industry concern and the Brazilian Government.¹

It is apparent from the post-War efforts of the different countries of the world that the problems of the marketing of agricultural products are at last being given serious consideration. It has now been recognized that marketing plays an important part in the national economy of the respective countries. Without a developed marketing system the farmer labours under distinct disadvantages, in as much as his sales are so many isolated acts without any plans. He sells whenever the crops are ready for the market, or when he is in need of money. Frequently he has neither the time nor the business ability for undertaking the sales. It is a truism that united we stand and divided we fall. When producers go to the markets—generally the smaller are frequented more on account of long distances intervening between the bigger ones—they do not get good prices owing to insufficient knowledge of marketing. They are not in a position to benefit from the wholesale and specialized markets as they deal on their own and have very small supplies to offer as compared with the much larger transactions carried on there. What is needed is that the individual farmers should unite for the purpose of disposing of their joint produce on better terms, which would result from the increased bargaining power of the agricultural community as a whole. The produce would, usually, be of little value if the marketing operations are not performed. The agricultural commodities are produced in the countryside. They must first of all be transported from there to the urban areas where a large section of the total population lives and needs feeding and clothing. Moreover, the distribution of the same takes place from the big central markets, and produce must be taken there before being despatched

¹ *World Agriculture.*

in other directions. At this stage the commodities must be cleaned, graded, and standardized, otherwise sale would be difficult with mixed lots.

Further, there are special aspects of agricultural marketing which deserve notice. Conditions in agriculture are so different from those obtaining in manufacturing industries. In the factories, production is undertaken and regulated according to the demand. Supply is, generally, adjusted to the existing or the expected demand. But in agriculture the quantity of production is never known beforehand with any certainty. (Sometimes an increased acreage produces a smaller crop, and a decreased acreage often yields a larger crop.) Weather, insect pests, plant diseases, and other factors beyond the control of the individual farmer determine the yield and quantity of his output. Moreover, the farmers have no definite control over quality. Grains, fruits, and vegetables show variations in quality under the influence of the above-mentioned factors. The weather, too wet or too dry, too hot or too cold, is always a fundamental factor in determining quality of output. Again, the nature of agricultural operations is seasonal. Crops cannot be sown, ripened, and harvested at will. They have to go through a period of growth, they must have a certain set of conditions during that time, and their frequency every year is strictly limited. So the agricultural produce can only be had at specified intervals, and that too in varying quantity and changing quality. But the demand exists all the year round. People must be fed and clothed the whole year. Therefore a system of storage is essential whereby the yield of different seasons is pooled together and is withdrawn gradually to meet the demand. It amounts to a system of rationing. If storage facilities do not exist, the year's crop would either be used up within a shorter period on account of the absence of any control or it would deteriorate and become unfit for consumption long before the year is out. It is really variations in the supply which, in normal times, cause the greatest maladjustment between production and distribution. In order to adjust supply to demand, it is essential that arrangements, in the shape of warehouses—either owned by the State,

the Railway and Steamship Companies, or by private enterprise—for the storage of the commodities be available at important points throughout a country.

Another marketing function is that of financing. Whenever marketing operations are carried on, somebody's money has to be used to finance the different stages. During the course of these transactions a certain amount of risk exists for the owner of the goods. The market price might go down, and result in the reduction of profits or in an actual loss. Or the commodities might be spoiled during storage or transport. Agricultural products are notorious for their susceptibility to the elements and careless packing and carriage. This means that someone, i.e. the owner, has to assume many a risk in the course of marketing, introducing thereby yet another marketing function, viz. that of risk-bearing. The above-mentioned, together with some minor ones, are known as the marketing functions, as they are necessary for the marketing of commodities. They are mostly performed by the middlemen, who are usually carrying out the marketing processes. But if the individual farmers are themselves to arrange for the joint sale of their produce they will have to undertake the foregoing functions, which are inseparable from scientific marketing. The three important functions—viz. transportation, grading, and storage—involved in marketing agricultural products are instrumental in creating the three utilities—place, form, and time respectively. Marketing is in fact a part of production: they share essentially the same characteristics. It is little use for the farmer to grow certain crops if he cannot find a market for them, or if he cannot sell them at a profit. The farmer needs direction alike in the matter of cultivation and marketing of his produce. The business man, concerned as he is with the satisfaction of consumer's needs, regards marketing as primarily a matter of distribution. We shall, however, concentrate upon the progress of the agricultural products from the farmer to the wholesaler.

While discussing the methods of improving production we should not forget the peculiar nature of agricultural operations. Agriculture is dependent on many factors, known as "acts of

God," over which man has no, or at any rate very little, control. Much is being done by scientists to overcome these handicaps; and they have even succeeded in the Soviet Union in making rain from the clouds (which would otherwise have passed over) by sprinkling them with chemicals from aeroplanes. Still, the time cannot be visualized when the yield from the fields could be depended upon with any certainty. Moreover, even after production and preparation for the market, the commodities are subject to special risks. Agricultural produce is mostly perishable, e.g. it might be eaten away by mice, or destroyed by wet or by insects. We can never be sure of the supply, not to mention the quality, of the farmer's crops. We cannot regulate agriculture at will. But if we cannot determine production and supply, we can, through regulated and scientific marketing, arrange the distribution in such a manner as to partly counterbalance the vagaries of nature. Careful study and research will eventually result in increasing the efficiency of market distribution. Yet another factor makes the case for the study of marketing more urgent. The farmer is essentially a man of small means, lacking the strength either of knowledge or of organization. Acting in isolation, he may fall an easy victim to the middlemen and the merchants, and may fail to get the competitive price for his product. It is evident that economies on the marketing side are quite as important for him as economies in respect of the internal organization of his farm. Attempts have been made in the past to decrease production costs, and they have been reduced to a certain extent. But the costs involved in the actual performance of marketing operations do not seem to have decreased as rapidly, if at all. There is general agreement that they are still positively high. "The possibility of reducing costs of production of some crops is greater on the cultivating than on the marketing side, but there is no crop in which economies of marketing within limits are not attainable. The reduction of the costs of marketing is, therefore, one aspect of the question of reducing costs generally."¹ That this is true of all the countries, more or less, is borne out by American authors

¹ *Agricultural Economics*, by George O'Brien, p. 91.

who have analysed the production and selling costs of different staple articles.¹

Various types of waste in distribution, ungraded and unstandardized commodities, poor and unscientific packing and methods of transport, absence of public markets and warehouses, unbalanced production, lack of market information, unfair practices by certain people, and bad credit facilities are the most important causes of inefficient marketing and high costs. All the present troubles in the field of marketing and the resultant evils would appear to be due to a failure to see marketing in its proper perspective. Otherwise there is no justification for its not having been given the same consideration as the other stages of production have received. The result is that there is considerable waste on account of defective selling efforts.

NOTE (see p. 5)

It was the intention of the present writer to correlate world agricultural production with consumption in order to study the extent to which supply and demand previous to the "Great Depression" were moving in unison, and to see what effect the growth of population had on the raising of the various crops. Such index numbers were to be obtained as would eliminate the effects of monetary changes and fluctuations in the currencies of the different countries of the world. The only numbers (indices) available of the kind were those published by the League of Nations; but they revealed a number of limitations rendering them unsuitable and even dangerous for the purpose. In the first instance, to study the extent of over-production, if any, it was desirable to start with the pre-depression period and to compare those figures with others during the depression; it was there that the first difficulty was encountered. Prior to 1930 the world production index numbers (the old series) had 1913 as the base, but the new series had the average of 1925-29 as the base. Obviously these two sets of indices could not be compared, nor could they be brought to a common level. Moreover, although

¹ Cf. Paul D. Converse, *Elements of Marketing*, p. 1033.

weighted index numbers were more satisfactory in certain respects than unweighted ones, unfortunately, in fixing the different weights, the relative importance of the commodities as measured by their aggregate value at representative "world" prices had been taken into consideration. The writer's assumption was that before the depression set in the production of primary goods was low relatively to the demand (represented by the population), hence the high prices at that time; but that gradually production increased in relation to demand (again represented by population), contributing to the fall of prices, and finally ended in the depression. As the weighted indices of the League already carried the price element in them, they could not be used to throw any light on the question. This prevented the use of any of their figures.

An alternative course was possible, i.e. to formulate one's own index numbers of production. The idea was to take the aggregate quantity of the world agricultural production in 1913 as 100, i.e. the base, and to repeat the process for successive years in order to bring out the annual fluctuations. Here again certain obstacles beset the path. Were quantities only to be taken into consideration? In some parts the cultivation of coarse grain had lately been replaced by money crops, probably resulting in a decrease in the total quantity of all commodities grown; but there might not have necessarily been an equal fall in the aggregate value, or there might even have been some gain and *vice versa*. This showed that quantity alone was not sufficient data whereby to gauge and interpret the world changes in production. The desirability of taking prices also into account became apparent. In other words, it would have meant preparing the index numbers on the basis of aggregate value of agricultural production of each country in different years. The adoption of this method would have been at variance with our purpose, i.e. the price element would have been introduced again. Lastly, it was noticed that in order to give a full picture of agricultural production, dairy products also should be included, particularly as there had been during the last fifteen years a great changing over from cultivation of crops to dairy farming; but figures pertaining to it did not even

claim to be satisfactory. Both the League of Nations' figures and those of the International Institute of Agriculture contained only sketchy information about the herds reared over the major parts of Asia and Africa. The material available about the cultivation of arable crops was far from being complete, but the data pertaining to dairy products of about half the world were either missing or unreliable. Under these circumstances it was felt that no useful object could be achieved by pursuing the point any further.

CHAPTER II

THE INDIAN ECONOMIC BACKGROUND

INDIA, although a part of Asia, is practically a continent by itself. The Indian Empire, including Burma, has an area of 1,808,679 square miles, and comprises British India and Indian States with areas of 1,096,171 and 712,508 square miles respectively. According to the Census of 1931, the population of British India was 271,526,933 and that of the Indian States was 81,310,845, making a grand total of 352,837,778 for the whole country. In other words, the people of this sub-continent amounted to nearly one-sixth of the human race. The population of India is increasing constantly. Between 1911-21 it increased by 1·2 per cent only, mainly on account of the epidemic of influenza which swept over the whole country in 1918 and 1919, and carried off 12 to 13 millions as its victims and affected about 125 millions, i.e. two-fifths of the total population. During 1921-31, however, the increase was 10·6 per cent. For the fifty years 1881-1931 the rise in population has been 39·0 per cent.

The ever-increasing population is putting more and more pressure on the land. The density of population has risen as follows:

	1911	1921	1931
All-India	174	176	195 per square mile
British India	222	225	248 " " "

The density rises to over 1,000 per square mile in certain rural areas in the fertile Indo-Gangetic Plain. "There is, however, in Bengal an even higher general level of density, since the Dacca Division has a mean density of 935 persons and reaches a rural density of 3,228 per square mile for Lohaganj *thana* (police circle), and a mean density of 2,413 for Munshiganj subdivision . . ."¹ This inevitably results in an unbearable pressure being put on

¹ *Census of India, Report 1931, vol. i, part i, p. 4.*

the soil.¹ The progress of urbanization has been very slow during the thirty years of censuses in the present century, the whole increase being a little more than 1 per cent: the urban population has increased from 9·9 per cent in 1901 to 11·0 per cent in 1931. As compared with 1921, the last census shows an addition of 0·8 per cent, which can be due partly to the natural increase of the pre-existing urban population and partly to migration from rural areas. "Increasing urbanization is not, however, taking place equally with reference to towns of all sizes. . . . The villages have maintained their relative position on the whole; the medium-sized towns have lost, and the largest towns have gained, in population."² Although this was written before the 1931 census, yet, according to the latter figures as well, the tendency remains about the same. The bigger towns and cities have increased both in number and total population, and the small towns with populations of under 5,000 each have gone down in those respects. The rural areas show an all-round increase, but the urban population has gained slightly on the whole as shown above.

As crops depend on the existence of plant food and moisture in the soil, so the character of the agriculture of a country depends largely on its soil and climate. The limitations imposed by the nature of the soil, and above all by the climate, tend towards local specialization in certain crops. Thus wheat thrives well in the north and north-west, these parts having a clayey soil and rather a hard winter with light rains. Paddy and jute do well in the eastern parts of the country, the former on the east coast, too, on account of the heavy rainfall there. Sugar-cane grows ideally in the middle of the Indo-Gangetic Plain, i.e. in the eastern Punjab, the United Provinces, Bihar, and some districts of Bengal, where the soil is

¹ "The crowding of the people on the land, the lack of alternative means of securing a living, the difficulty of finding any avenue of escape, and the early age at which a man is burdened with dependants, combine to force the cultivator to grow food wherever he can and on whatever terms he can."—*Report of the Royal Commission on Agriculture in India*, 1928, p. 433.

² *The Economic Development of India*, by V. Anstey, p. 42.

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alluvial and rich, but neither too dry nor too damp, and contains just enough moisture.

India is essentially a rural country. Having about 700,000 of them, she has been called a "continent" of villages. The Census Report of 1931 tells us that the rural population is 89 per cent of the whole. All the people inhabiting the rural areas are not, however, engaged in agriculture, although some, whilst primarily engaged in trades and professions, carry on agriculture as a subsidiary industry, or vice versa. But in nearly every village a section of the population, howsoever small, will be found to be solely dependent for their livelihood upon non-agricultural pursuits. Therefore the population depending on agriculture is naturally less than the total rural population; even then it is overwhelming and, what is more important, has steadily risen. In practically all the advanced countries of the world the percentage of population living on land has tended to decrease during the last half-century. On the other hand, in India, it has increased. The percentages of those engaged in different professions are as shown on the opposite page.

Pasture and Agriculture (Class I) provide occupation for 71 per cent of the actual workers of India, if those be included who follow it only as subsidiary to some other occupation. But the figures for 1931 should be read with caution. One change of particular importance was made in the census schedule of that year. The classification "earner, working dependant and dependant" was substituted for the 1921 classification of mere "workers and dependants." This change was effected for the purpose of greater elucidation and accuracy; but it was discovered at the time of tabulation that a large number of women had chosen to be enumerated under "Domestic Service" rather than be put down as "working dependants." False pride and class consciousness led to the adoption of this peculiar attitude. It is in the agricultural class mostly that women are to be found helping their menfolk in their respective pursuits; hence it was there that the new tendency was most noticeable. In 1931 the number of workers under this class decreased by 5.06 per cent as compared

Means of Subsistence	Percentage Distribution of Workers in		Percentage Increase or Decrease 1921-31	Percentage of Total Population supported		Percentage Increase or Decrease	
	1921	1931		1921	1931	1911-21	1921-31
<i>Total Population</i>	—	—	—	—	—	1.2	10.6
I. Exploitation of animals and vegetation	72.17	67.11	-5.06	72.98	67.0	1.8	-5.98
II. Exploitation of minerals	0.24	0.23	-0.01	0.17	0.1	2.3	-0.07
III. Industry	10.75	9.97	-0.78	10.49	9.7	-6.0	-0.79
IV. Transport	1.34	1.53	0.19	1.37	1.5	-13.8	0.13
V. Trade	5.50	5.15	-0.35	5.73	5.4	2.0	-0.33
VI. Public Force	0.71	0.55	-0.16	0.69	0.5	-9.0	-0.19
VII. Public administration	0.69	0.64	-0.05	0.84	0.8	-0.1	-0.04
VIII. Professions and Liberal Arts	1.43	1.50	0.07	1.59	1.7	-7.1	0.11
IX. Persons living on their income	0.13	0.14	0.01	0.15	0.1	-11.1	—
X. Domestic Service	1.73	7.08	5.35	1.44	13.3	-0.6	6.16
XI. Insufficiently described occupations	4.06	5.05	0.99	3.51	—	20.1	—
XII. Unproductive	1.25	1.05	-0.20	1.04	—	-5.7	—

Source: *Census of India Reports*, 1921 and 1931, vol. i, part i.

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with 1921. On the other hand, "Domestic Service" showed an increase of 5·35 per cent, which more than balanced the fall under Class I.

As a matter of fact, fewer women now confine themselves to housework than before. On account of greater education, more freedom, keener competition in business, and harder struggle for existence—however slight and imperceptible the tendency may be, that it is there cannot be denied—more and more women are taking to work now than they did formerly. The figures of 1921 showed this tendency, as in that year, when compared with 1911, the number of total population supported in the class "Domestic Service" registered a decrease of 0·6 per cent. Thus in 1931 also some decrease might normally have been expected. If the change in classification had not been introduced in 1931, more females "would have appeared as workers (mainly if not entirely agricultural) in the occupations in which they assisted the male members of their families."¹ And if we assume that all the 535—the apparent increase in the number of workers in the "Domestic Service" class, 1921–1931—belonged to "Pasture and Agriculture," then Class I would have gained by 0·29 per cent, instead of suffering a decrease of 5·06 per cent.

"Industry," on the other hand, is shown to have 0·78 per cent less workers in 1931 than it had in 1921. There was also a fall of 0·35 per cent among workers under "Trade." These losses were explained to be balanced in part and largely met by the increase under "Insufficiently Described Occupations" and "Transport."² This might be a way of finding the losses under one head as gains under another, but it cannot be interpreted to mean that the position of "Industry" remains the same. That class definitely lost in the 1931 census, being responsible for the occupation of 10 per cent of India's workers as against 11 per cent in 1921.³ Moreover, in the latter year the population supported by industry had already decreased by 6 per cent in comparison with 1911. This shows a consistent decline in the percentage of population engaged in "industry." While the industries of India

¹ *Census of India, Report*, vol. i, part i, p. 281.

² *Ibid.*, p. 281.

³ *Ibid.*, p. 290.

are growing so far as capital invested, total output,¹ and the field of activity, are concerned, they do not employ a larger percentage of the population. Take the case of cotton textile, for instance, which is the greatest industry of India. It employs the largest amount of capital, engages most workers of all, and is supported and patronized by the whole nation. It is the most representative of the country too, as cotton mills are established in all the major provinces of India. But by 1932-33, as compared with 1922-23, whereas there had been a 54 per cent increase in output (1,711,323,000 lb. in 1932-33 against 1,111,148,000 lb. in 1922-23), additional employment amounted to 27 per cent (453,565 workers in 1932-33 against 356,758 in 1922-23) only. Even if the average of the ten years is taken, the resulting increase is 18 and 9.5 per cent respectively—roughly the same position. This shows that the number of workers employed has not increased at the same rate as production. Again, in the jute industry in 1929-30, the year of the greatest industrial activity, mill consumption of raw jute bales (400 lb. each) was 6,424,000, as against 4,747,000 in 1922-23, an increase of 35.3 per cent; but the average daily number of persons employed had risen from 321,296 to 343,257 only, an increase of 6.8 per cent. Similarly, the production of paper mills in British India increased from 23,576 tons in 1922 to 40,712 tons in 1929—by 72.7 per cent—whilst the average number of persons employed daily rose from 5,213 in 1922 to 6,730 in 1929—by 29.1 per cent. Figures of other modern industries, to whatever extent they can be used, reveal the same story: there has been expansion in production, but a proportionately lower increase has taken place in the number of persons employed.

The increase in industrial activity affects employment inversely. The more the number of industrial concerns and the more the working capital, the greater is the use of specialized machinery

¹ (a) "Population and Production" (1920-32), by Professor P. J. Thomas (Paper read at the Indian Economic Conference, 1935).

(b) "The Indian Budget," by Professor P. J. Thomas, *The Asiatic Review*, April 1936.

and labour-saving devices. "The technical progress in all branches of production, on which the present development of rationalization is based, implies a reduction in the demand of labour which is not temporary and conditioned by a passing phase of the business cycle, but permanent."¹ Besides, the more organized industries set up, the larger is the number of unorganized workers and craftsmen driven out of their work. Their manufactures—hand-made and on small scale—cannot compete with machine-made goods, with the result that the artisans, particularly in the rural areas, give up their original industry and join the ranks of the agriculturists. And the industries, which have driven the small manufacturers out, do not employ workers equal in number to those rendered unemployed. The present economic depression has shown that with the increase of unemployment in towns and industrial centres in India, where an organized machinery of unemployment relief does not exist, and where the financial position does not permit relief to be given in the form of public works on a sufficiently large scale, and where the Governments are compelled to meet the situation without incurring too great an expenditure, there are distinct signs of an exodus of urban population in search of subsistence on land.

The natural conclusion from the above fact is that industrialization has not relieved the burden on the soil, and that in spite of the new industrial ventures, India still remains essentially an agricultural country. The sooner it is recognized that the setting up of large-scale industries cannot solve the population problem for a long time to come, and that it is through the organization and development of agriculture alone that the conditions of the masses can be improved, the more would it be in the interests of the country. The protagonists of the policy of industrializing India seem to regard it as a panacea for all the economic ills of the land. Without questioning the need for starting new industries and for manufacturing articles of our daily requirements, it may be pointed out that, at the present rate, industries cannot provide employment for a much larger percentage of the population.

¹ Vide *The Agricultural Situation*, I.L.A., 1931-32, P. 50.

For a number of reasons, India cannot be industrialized to the extent and in the sense that hold good in Europe and the United States. She might increase the number and size of her industries—in fact, this development is going on even to-day—but industrialization is unlikely to be rapid. The majority of the people, i.e. those living in the countryside, are accustomed to an open-air life, and do not like the closed and congested atmosphere of the towns and cities. The intense heat for about three months in the year and excessive humidity for the same period greatly reduce vitality and vigour, and render work inside the factories definitely uncomfortable. No wonder people dislike it. They are born and bred in an open and free atmosphere, and prefer to remain in the same.¹ This explains why Indian labour is rather immobile and inter-provincial migration is not common.

*Number of Emigrants Embarked from Indian Ports to Various Colonies**

(1) Year	(2) Total Number of Emigrants	(3) Number of Emigrants who returned to India	(4) Net Emigration (2)-(3)
1921-22	1,047	9,081	— 8,034
1922-23	80,701	103,091	— 22,390
1923-24	146,208	99,254	46,954
1924-25	134,893	57,569	77,324
1925-26	159,921	57,777	102,144
1926-27	219,444	81,700	137,744
1927-28	203,813	124,593	79,220
1928-29	105,185	129,434	— 24,249
1929-30	137,196	134,331	2,865
1930-31	76,327	143,336	— 67,009
1931-32	31,891	150,943	— 119,052
1932-33	18,140	131,325	— 113,185
Total ..	1,314,766	1,222,434	92,332

* Source: *Statistical Abstracts of British India*.

¹ "The vast population of India is essentially agricultural and rural, town life being to the majority of the people unpopular and artificial."—*Census Report, 1921, p. 64*.

At the same time there is barely any possibility of the hardships of over-population being removed or even decreased through migration. Emigration, when India is taken as a whole, influences the population very little. The following figures show that many emigrants have returned to India during the period 1921-22 to 1932-33, due to greater restrictions imposed upon them by the countries where they had settled. And after 1929 the adverse economic circumstances reduced their resources and drove them back home.

The only logical alternative, then, is to develop agriculture and to make it more paying, so that those who are dependent upon it may be compensated for the congestion on land by increased produce and larger incomes: rationalization of cultivation, and improvement of crops are immediately needed.

Apart from all this, the agricultural classes form such an overwhelming part of the population that unless their income increases, consumption must be meagre, and the home market will remain undeveloped: a low standard of living is a serious barrier to industrial advancement. Consequently the development of India's agriculture will be directly in the interests of her industries, as well. The interdependence among agriculture, industry, and commerce is so close that it is impossible for one to enjoy lasting prosperity regardless of the others. The time has undoubtedly come when India's industries should also be developed. They are necessary in order to provide a market for her agricultural produce, and should not be left in the present backward condition. To improve them she must use proper plant and machinery, and utilize the modern devices of manufacture. The industries should be built on the basis of world competition. For a few years, during the "infancy" stage, they may be protected against the competition of the grown-up foreign industries, but this protection should not be permanently maintained. The country should not be taxed, nor the consumers asked to pay, for ever, so that dividends for the promoters and the shareholders of the various companies may be available. The different industries should, as soon as possible, stand on their own legs, and face the world competition. One

way of doing this is to employ the latest methods of manufacture. Specialization has made it possible for the European, American, and Japanese industries to reach their present stage of supremacy. Mass production has enabled them to capture the world markets. In order to compete, the Indian industries will have to be equally efficient. Her factories must be equipped with up-to-date appliances and machines to give her industries a fighting chance. Foreign industries should be fought with their own weapons, fairly and squarely.

Industrial progress in a country depends very much on its ability to manufacture machinery. India produces at present few iron and steel goods, with the exception of iron rails, railway rolling-stock, corrugated and galvanized sheets, bars, wire, wire nails, and other material of minor importance (mostly for building purposes and domestic use). No machinery worth the name is made in the country. Some agricultural implements and even machine ploughs are manufactured, but that is not enough. Foundries and plants to turn out manufacturing machinery are non-existent, and it may be ages before the deficiency is made up. It is not possible, however, to make a fair comparison between the Indian production of iron and steel and the imports of the same. In the first place, the statistical returns of output are according to quantitative measurement only; whilst the imports, consisting of miscellaneous goods and plant, are naturally recorded in terms of value. The locally manufactured goods have been increasing at a fast pace: the figures for the three recent years given on page 48 show the progressive out turn.

Imports of iron and steel and manufactures thereof have been to a very great extent replaced by Indian production, but vehicles (including mechanically propelled) have assumed vast importance. Machinery and millwork still form a major part in the imports.

Industrialization is growing apace, and as an instance of this may be mentioned the total number of factories in British India which are subject to the Factories Act: there were 5,026 factories in 1922, and by 1932 the number had gone up to 8,241, a growth of about 64 per cent in a decade. At the same time transport is

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getting more and more mechanized. As the standard of life rises, the demand for bicycles, motor-cycles, and cars, not to mention aeroplanes, will increase; but India is as much distant from manufacturing mechanically propelled vehicles to-day as she was when they were invented. As India cannot afford to wait till home-made machinery and vehicles are available, she is left with no option but to buy them from abroad. Whether we get them from the United States, the United Kingdom, Sweden, Germany,

*Detailed Statement of the Iron and Steel Manufactures Produced in India**

Description	April to March (in tons)		
	1932-33	1933-34	1934-35
I. Pig iron	880,222	1,109,390	1,343,075
II. Iron castings	46,988	67,935	80,841
III. Steel ingots	590,778	720,917	834,030
IV. Finished steel	441,594	550,696	627,358

* *Monthly Statistics of the Production of Certain Selected Industries of India.*

Japan, or any other country, we must import from foreign manufacturers for a long time to come.

Some people talk of making India self-sufficient and economically independent. Their idea seems to be that by stopping imports they would not have to pay for them, and hence would save India's money to develop her resources; and that by stopping the exports of food crops and fibres, larger supplies would be available for consumption at home. Moreover, it is pointed out that most countries have adopted a policy of particularism and national self-sufficiency. But how can Indians start new industries when they do not manufacture machinery themselves? The purchase of engines, boilers—prime movers—plant, technical instruments, mechanical appliances, etc., from foreign countries cannot be avoided. Indian capital will pay many times over if it is applied to the purchase of these articles. Even if self-sufficiency

is adopted as the objective, it will not be possible to achieve it in a decade or two. In the meantime India must secure the necessary goods through international trade.¹ To achieve self-sufficiency, not only foreign machinery is needed, but training, experts, and capital are also required. Thus the country cannot afford to remain isolated. It must take part in international commerce.

Moreover, because Indians have not developed their industries, they cannot create a good demand for their raw materials. They suffer a loss of national income through the absence of industrial activities. Sometimes these losses are still more accentuated, as in the case of exports of oil-seeds, where, so to speak, the fertility of soil is being sent out of the country. The remedy for this is to start oil-mills and utilize the seeds in our own factories, so that with an increased demand the prices would rise and make it worth his while for the grower to sell within the country. In this way the exports would be checked. On the other hand, if we try to stop the exports by prohibiting them, or by export duties, it would not necessarily mean greater consumption at home. Foreign demand and prices help in keeping up India's present production. When they cease to have any influence on our commodities, or when the influence is reduced to the minimum, the prices would fall as our requirements would not be so great as to absorb the total supplies. The burden of the drop in prices will in the end be borne by the poor agriculturists, and not by the dealers. Low prices will eventually result in less production, and not in making larger quantities available for local consumption. The diversion of economic resources from natural channels and the subordination of economic factors to other considerations, such as the achievement of self-sufficiency within tariff barriers,

¹ "... India should aim at greater national self-sufficiency, in the sense of endeavouring to attain a well-balanced economic system, capable of supplying the main necessities of life, agricultural and industrial. If we assume this goal, it is obvious that it is of primary importance to stimulate industrial development, as India is still predominantly agricultural, and depends on imports for both manufactured goods and for many of the elementary requisites of industrial production."—*The Economic Development of India*, Anstey, p. 478.

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would reduce the national income and, subsequently, lower the standard of living.

As regards the current tendency of most of the countries of the world, it is no doubt true that international commerce has contracted very much during recent years on account of, firstly, the agricultural crisis since 1929-30, and later—from 1930 onwards—due to the monetary and financial troubles. Hence a craze went round the European countries to make themselves self-sufficient in agricultural products. It seemed that free intercourse in trade had come to an end, and that trade, from an international basis, had been placed on a national footing. But gradually a new phenomenon began to take shape. Business relations between different countries were undergoing another change. Nations with common interests were drawn closer to one another. Mutual advantages were discovered, and bilateral trade agreements and treaties were entered into by various countries of the world. Although there has not been any appreciable improvement in world trade so far, the mere fact that the agreements mentioned above have been signed denotes that the doctrine of particularism could not be practised as complete national self-sufficiency has received setbacks in so many cases.

Ultimately the result might not be competitive world economy as it obtained before the depression, but, however restricted its scope and different its basis, international trade is sooner or later likely to come back through the recent evolution of commercial policy and international economic relations. It might be said in the end that, in view of these reasons, it will not only be difficult for India to achieve complete self-sufficiency, but that it will definitely be against her own interests. In brief, in order to start industrial and manufacturing concerns, India wants machinery and plant very badly; in order to pay for the imports of the same and with advantage to herself, she must export some goods; and, being an agricultural country, the best export trade she can carry on is in raw material and agricultural produce. The whole question thus resolves itself into that of the dependence upon the agricultural industry for the purpose of developing international

commerce. We have already shown what a dominant part agriculture plays in the national economy of India, and what a large percentage of population is, directly or indirectly, connected with agriculture. Now we are in a position to realize the claims of that industry from the point of view of both internal and external trade. It is clear that every aspect of an industry of such overwhelming importance is deserving of the most careful study, and that it cannot be left in the present deplorable condition. It needs developing. It should be thoroughly organized and placed on a scientific basis.

In recommending the improvement of agricultural production with the object of increasing exports, one should not neglect the demand side. The demand for the necessities of life, all kinds taken together, is undoubtedly very inelastic; but the demand for any one particular kind is just the reverse—it is very elastic, unless one country happens to have a monopoly of that commodity. Hence the demand for agricultural goods can, and does, vary. Nor is it rational. The eccentricities of demand are a matter of common knowledge. Taste, appetite, habit, health considerations, and price are the factors which determine choice in food. Producers and dealers sway the public opinion and create demand for their goods through publicity campaigns and advertisement drives. The *Preliminary Report of Marketing*, published in 1925 by the International Institute of Agriculture, goes so far as to include the stimulation of demand by advertising among the essential functions of marketing. Such enterprise is very effective, and is responsible for increasing the existing, and for creating new, demand. Thus multifarious considerations ordinarily determine the demand for various articles. This brings out the truth that the demand for a particular type of goods is always changing. The producers of agricultural commodities will, consequently, never be in a position to dictate to the consumers. Therefore the most advisable course is to meet the changed demand of the public as soon and in as short a time as possible. The adjustments between the supply and the demand should be quick. If not actually able to change old and create new demands, the producers

should at least be in a position to foresee and detect the new trends, or any likely trend, in them. Through the anticipation of demand, the supply can be regulated accordingly. There should be a perfect understanding between producers and consumers. Unfortunately this is not the case in India, particularly where foreign buyers are concerned; and it is one of the causes responsible for the diminution of her share in the world trade in recent years.

*India's Share in the World Trade**
(as percentages of total)

Items			1929	1932	1933	1934
Imports	..	..	2.55	2.51	2.29	2.36
Exports	..	..	3.54	2.75	3.06	2.95
Total	..	..	3.02	2.65	2.67	2.64

* Source: *Review of World Trade*, League of Nations, 1935, p. 27.
Basis: *Recorded Values; Special Trade; Merchandise only.*

No doubt the decline in our exports of food grains and raw materials is, to a certain extent, the outcome of the great world-wide economic depression and the consequent low prices prevailing, especially among the agricultural produce; but it is also directly due to our neglecting the requirements of foreign buyers, not keeping pace with other exporting countries in studying the demand and not organizing the industry.

New demands come to light, and are even deliberately created in the Western countries. But apart from the fact that they sell to grain dealers, commission agents, or in a few cases to consumers direct, the Indian peasants are ignorant of what happens to their produce. They know nothing about the overseas trade of India. In such circumstances, how can we expect them to improve upon their present efforts and to grow something which will be in a position to compete with the world produce? The hard fact has to be faced that there is no system, no organization, and no machinery to look to the marketing of the agricultural products

in India. Marketing involves the function of adjusting supply to demand. In order to control supply, the whole field of production needs to be managed, but this subject has not been given serious thought. Nevertheless, it is of the utmost importance to India. It deserves study and subsequent action. A marketing organization could watch the changes in demand, help in regulating the supply, and advise in the fixation of grades and standards. It means that, ultimately, production as well could be influenced and directed on sound and proper lines. In order to get good offers and to make profitable sales, production has either to fall in with the demand or to create and subordinate it. In each case, production needs guidance, and the best agency to guide is a marketing agency which is always expected to be in touch with the market and the consumers.

These statements are not intended to create the impression that a turnover from one kind of enterprise or farming to another can be easily effected. But with a fair standard of education, intelligence, and will, through co-operative effort and supported wholeheartedly by the Government, the people of any country can reform their agriculture if natural conditions are favourable. Denmark is a standing example of a large-scale change-over from cereal production to dairy-farming in the latter part of the last century. After 1861 she improved her agriculture for home consumption, but developed dairy and poultry farming for export purposes.¹ She was, no doubt, helped by the fact that no competition existed at that time from Canada and New Zealand in dairy products: many other circumstances also contributed towards her success. Even if we ignore the solitary instance of Denmark, where a mass change took place on a national scale, it can be pointed out that small changes or adjustments are always taking place in all the countries of the world. Universal and diametrically opposed changes may not be possible now, or may need great patience,

¹ See "Agricultural Production in Denmark," by Harold Faber, in the *Journal of the Royal Statistical Society*, January 1924, and "Danish Agriculture," by Lord Bledisloe and Mr. Christopher Turnor, in the *Nineteenth Century*, December 1923.

and may take a long time—they do not form the basis of the discussion here. We will, however, return to this topic at a later stage. The study of marketing becomes all the more important, and the establishment of marketing agencies and organizations all the more urgent, when we come to examine the condition of Indian producers. Agriculture suffers through lack of organization and equipment. This is largely so because the growers of farm products in India—the peasants—are poor, illiterate, short-sighted, prodigal, and, in a word, backward.

The EDUCATIONAL BACKWARDNESS, rather the universal illiteracy, in the rural areas is a real impediment to progress. The villagers do not lead an organized life, but merely exist from day to day. They have no future and no prospects. Their vision is blurred owing to lack of perspective. The percentage of literacy is still very low. “. . . although literacy has increased appreciably faster than the population, the percentage correspondingly literate now is still not more than 8·0.”¹ The majority of the literates live in towns, leaving a still smaller percentage in the villages. The agricultural methods are as old as civilization itself. Nevertheless, it should be pointed out that although illiteracy may dull the intellect and take away initiative, yet it does not necessarily mean a lack of appreciation of useful suggestions and friendly, well-meant advice. Experience proves that the peasant, though illiterate, is responsive, and is capable of adopting improved methods if he is properly instructed in their use and is convinced of their superiority. It is not surprising that, under the present circumstances, his is a reckless life. Planned production and orderly distribution are ideas foreign to him. He and his family are generally half-fed, poorly clothed, and badly housed. He lives in perennial poverty and indebtedness; but if a social, religious, or domestic ceremony has to be performed, he must spend, or the society would look down upon him, or might even ostracize him. It is regarded a duty to spend on such occasions: beg, borrow, or steal, spend he must. If he has saved some money, it would be spent without a thought being bestowed upon the future. Even

¹ *Census Report*, 1931, vol. i, p. 324.

if he is without the means to spend, he never thinks of dropping the celebrations, but borrows to entertain others. This increases his already swelling debts, and more and more of his income has to be earmarked to meet the debt charges, leaving an ever-decreasing amount for the maintenance of an ever-increasing family. Not a dog's chance is left to him to pull through. Regarding himself as doomed, he resigns himself to his fate, saying, "Thy will be done."

The most important and urgent problem in Indian economics seeking solution to-day is that of RURAL POVERTY AND INDEBTEDNESS. The census places the number of agriculturists in constant debt at about 70 per cent. A peasant once in debt is always in debt. The debt is passed on from one generation to another, with additions on behalf of each generation, and without any prospect of being redeemed. It has been said that one must buy one's finance cheap and sell one's produce dear to make one's industry profitable; but the Indian cultivator buys his finance dear and sells his produce cheap, with the consequence that he is imposed on at both the ends with scarcely any hope of bettering his position. According to the Indian Central Banking Enquiry Committee, 1929-31, the average income of an agriculturist in British India does not work out at a higher figure than Rs. 42 a year.¹ The present position of rural credit is deplorable. Moneylenders still exploit the peasants, generally charging very high and quite often usurious rates of interest.² The Usurious Loans Act exists, but the Royal Commission on Agriculture in India, 1926-28, has declared that it "is practically a dead letter in all provinces."³ Usury is nothing new, and is not peculiar to India. It has existed in all nations and at all times. It has always been denounced, but never annihilated. Credit is very necessary for all kinds of undertakings. It is as necessary for agriculture as for business: hence debt is unavoidable. There is no ground for complaint so long as the agricultural debt is productive, and the rates of interest are

¹ Vide *Report*, vol. i, part i, p. 39.

² Cf. L. C. Jain, *Indigenous Banking in India*, p. 110.

³ *Report*, p. 438.

not usurious. No exception can be taken to legitimate borrowing and lending; but these have disappeared from India since long time past.

The various estimates undoubtedly prove that India's rural indebtedness is staggering. Many a ryot has lost his land and possessions and sunk into the position of a landless labourer and tenant: debt legislation has been passed in some provinces. That the problem needs immediate attention cannot be denied by anyone. Though indebtedness of the agricultural population has been there from old times, it has risen considerably during the last century, and more especially during the last fifty years.¹ The Indian Central Banking Enquiry Committee, to turn to it again, estimated the total rural indebtedness of India at about Rs. 900 crores,² and in their own words that was a very rough estimate. On account of a number of reasons brought out in his Minority Report of the same body, Mr. Manu Subedar differed from the majority.³ Hence this figure should be treated with a great deal of caution.⁴ It is beyond the power of the individual peasant to

¹ "It is more than probable that the total rural debt has increased in the present century; whether the proportion it bears to the growing assets of the people has remained at the same level, and whether it is a heavier or lighter burden on the more prosperous cultivator than of old, are questions to which the evidence we have received does not provide an answer."—*Report of Agriculture Commission*, p. 441.

² *Report*, vol. i, part i, pp. 55, 56.

³ *Vide Report*, vol. i, part ii, pp. 31-35.

⁴ As a matter of fact, Professor P. J. Thomas is of the opinion that "... the general price-level never seems to have fallen so rapidly and drastically as between 1929 and 1932. The result is that all debts have increased in quantity as well as in burden. Since 1930, borrowings have been fewer, but the bulk of the older debt remains unpaid. ... Interest payment has slackened everywhere, and according to all accounts, hardly 20 per cent of the interest due annually must have been paid in the last three years. Calculating on this basis, the total agricultural debt of British India must have increased from Rs. 900 crores to about Rs. 1,200 crores. ... With nearly a 50 per cent fall in the prices of our staple products, the real burden of debt has more than doubled since 1929. The nominal burden of a debt of Rs. 100 raised in 1929 is still Rs. 100 and, if no interest has been paid, Rs. 148, but the real burden is about Rs. 150 and with interest about Rs. 222. If the total debt of

tackle indebtedness single-handed. The crushing burden embitters the life of successive generations. It is not a matter for surprise that the peasant adopts no effective measures to improve upon this state of affairs, and takes up a fatalistic attitude towards life and all that it holds for him.

Turning to the production side, we find that cultivation at its best is distinctly good, but the average is poor, and in the greater part of the country there is plenty of room for improvement. A number of economic factors tend to keep down the standard of cultivation. (a) The IMPLEMENTS used are primitive in character and ineffective in use. They are not many in number, and involve waste. They are generally made of wood, the ploughs being usually tipped with iron points. The indigenous plough serves the purpose of plough, harrow, and cultivator, and is combined with the levelling beam. Throughout the country, particularly in Northern India, the plough and levelling beam are the only implements possessed by the ordinary agriculturist. Hand implements consist of various sizes of hoes, the best known being the *kodal* (a sort of spade) and *khurpi* (a small hand hoe). Of harvesting machinery there is none, the function being performed by a sickle. Grain is separated either by treading out with oxen or beating out by hand, and winnowing is done by the agency of wind. (b) BAD VARIETIES OF SEED lead to a constant deterioration of quality. The average agriculturist's stock of seed disappears by the next sowing season through its being sold or consumed by the family. When time for sowing comes he invariably borrows grain from the local *bania* (grain-dealer) at a high rate of interest—even 50 per cent sometimes—or buys it from the latter. Such seed is mostly a mixture of different qualities and grades, if it is not actually adulterated with other grain, and is consequently of a poor standard. (c) The MANURE most common in India is the farmyard manure. But even all the available quantity of dung is not utilized

British India in 1929 was Rs. 900 crores, and if no repayment of principal was made in the meantime, the real burden of that debt must now amount to about Rs. 1,800 crores, and if all interest is in arrears, Rs. 2,200 crores."

—*The Problem of Rural Indebtedness*, 1934.

for that purpose, as the greater part is burnt up as fuel by the majority of the rural population. Hence the supply of organic matter to Indian soils is deficient. Often richer and even artificial manure is essential for money crops like wheat, cotton, sugarcane, and oil-seeds. Fertilizers—viz. oil-cake, fish-bone meal, flour phosphates, nitrates, green manure, etc.—should frequently be used in order to obtain better yields. The Indian peasant, however, knows nothing about these.

The various Provincial Agriculture Departments are carrying on efforts to introduce improved implements, seeds, and manures. Demonstrations are held occasionally in rural areas to popularize advanced methods of cultivation. Farms have been opened in a few places, and education is being imparted in the Agricultural Schools and Colleges; but these schemes have hardly passed an experimental stage. They are so few in number, isolated in some cases, and starved of funds that very little attention has been attracted by them. They have not yet touched the fringe of the problem. In view of the illiteracy and poverty of the country, it would not be an easy task for the officials to achieve a rapid progress. And it is not expected of them to stage a spectacular success: let the pace be slow, but first of all some headway should be made. Age-old and generations-old customs and habits have to be broken through—they take long to die. It would necessarily take time to bring about marked improvements which can only result from a country-wide drive in real earnest and a gigantic push on a national basis. The following figures throw some light on the agricultural conditions of the East and the West. The value of the equipment per farm labourer in the United States, in 1925, was \$2,000, as compared with \$36 in 1870;¹ whilst the maximum cost of equipment (implements) in the Punjab village in 1926 was Rs. 23-4 only.² Yet the Punjab is the most advanced province in matters agricultural.

(d) LIVESTOCK is very poor. Low vitality and high mortality among the cattle are further weaknesses in Indian agriculture. The

¹ *Agricultural Crisis*, p. 17.

² Gajju Chak, *Punjab Village Survey*, No. 6, 1934, p. 193.

spread of cultivation has diminished the number of grazing-grounds, and insufficient fodder crops are raised. Many of the cattle are small, ill-fed, and inefficient: they are ill-bred and ill-kept as well, thus reducing their resisting power and making them an easy prey to many diseases and epidemics. Practically all cultivation is done by bullocks, and the capacity of these as draught animals varies from one district to another, and also depends on the cultivator's individual circumstances. His implements being few, bullocks form by far the most important item of his movable property. At present, breeding is not controlled at all. The result is to be seen in the hybrid progeny which is no good for specialized work. No distinction is made between dairy and draught animals, nor between those suitable for light work and others meant for heavy work. Some attempt has been made by the Government to improve the stock by billeting bulls at different places, but it represents a few solitary efforts, and is still on a very small scale. The present Governor-General, Lord Linlithgow, is taking keen interest in this reform; and some improvement may consequently be expected. The Veterinary Department is entrusted with the task of looking after the health of cattle, but on account of poor funds the dispensaries and hospitals have been established at such great distances that they are hardly useful at all. Half-hearted measures cannot be expected to bear any fruit.

(e) With the agricultural holdings excessively SUBDIVIDED and SCATTERED the farmer, in spite of his best endeavours, finds it impossible to make his agriculture profitable. The extent of an average holding works out at about 6 acres for an agricultural family of five persons. Holdings are not only small but fragmented, and the Indian laws of inheritance both perpetuate and intensify this evil. Modern implements cannot be applied to patches of land, and economies of big farming cannot be obtained. Large-scale and extensive agriculture is out of the question under these conditions. Moreover, a waste of time, land, labour, and capital is involved in the cultivation of small plots.

(f) We cannot end the discussion of agricultural production in India without referring to the question of IRRIGATION. Without

debating the land revenue system, and the basis of assessments, or the theory of water rates, it might be pointed out that, in practice, the Provincial Irrigation Departments have become sources of substantial revenues to the respective Governments. Primarily, the different projects were taken in hand as measures of protection against famines. It is true that, later, certain works were classed as productive, but the whole system has been essentially of a protective nature. They should pay their way, and even yield a net return on capital if by doing so no hardships are inflicted on the cultivators. A perusal of the proceedings of the United Provinces and the Punjab Legislative Councils reveals the fact that the water rates have not been lowered to the extent that the prices of agricultural produce have fallen. Thus the State is taking advantage of its monopolistic position. In such a case an element of taxation comes in. The best policy would be to apply the cost of service principle to the provision of canal water by the irrigation departments. Great progress has been made in that direction: the total acreage irrigated by Government works in British India is much higher than in any other country in the world. The canal systems have brought prosperity to vast areas. Famines are now a thing of the past. There might be scarcities, but famine conditions do not prevail any longer, or, at least, are not officially declared. In spite of all that has been achieved during the last fifty years, it cannot, however, be said that crops do not fail on account of shortage of rain, or due to failure of monsoon. Agriculture still remains "a gamble in rain." Out of every five years there is one good year, one bad year, and three indifferent years: rainfall is still the doubtful element in Indian agriculture. With certain exceptions, the future line of progress lies in the direction of small irrigation projects rather than the big schemes. The time has now come when more attention should be paid to the construction of local small storage works and minor sources of irrigation.

Next to canals, wells are the most important source of irrigation, and tanks rank third in this category. The Provincial Agriculture Departments are concerned with the development of well-irrigation only, and the future expansion of irrigation facilities will

be their responsibility. The conditions of the Punjab and the United Provinces are similar in this respect. Large tracts of land remain undeveloped or unirrigated. Isolated pieces of land are still uncommanded. Lift irrigation, both from the canals and rivers, and from the subsoil by means of tube-wells, can improve them. So far little is known about the cost involved in, and the economics resulting from, lift irrigation from the sub-soil when carried out on a large scale. One thing is clear, that tube-well irrigation does not pay unless extensive areas are watered, a number of adjoining fields take their supply in common, or some high-priced crop is grown. These are the main difficulties in the way of the average cultivators adopting this form of irrigation. There is no doubt that the introduction of tube-wells is a practical proposition, and that water can be economically lifted by this method. The ordinary agriculturist, however, has no funds, and knows nothing about machinery. The latter fact makes even those peasants hesitate who have some money of their own, or who can get loans for the purpose. In such a situation a central station can be used to work up a number of small tube-wells: the Government, the District Boards, and the Co-operative Irrigation Societies are in the best position to perform the task. The position in Bihar and Orissa and Bengal is very much similar. In these two provinces irrigation schemes, mostly small and depending on the pumping or on the lifting of water, as well as safeguards against floods, are needed. Irrigation has great possibilities there. On account of the existence of many rivers, small irrigation schemes involving the use of water by means of a weir and sluice arrangements can be initiated. The Agriculture Commission recommended that the Agriculture Departments should investigate the economics of tube-well irrigation, set up a separate staff to take charge of the construction and maintenance of minor irrigation works, and devise cheap and efficient pumps. Further, that such agency, instead of waiting for the cultivator to consult it, should go to him and urge him to adopt the scheme best suited to his requirements.¹

¹ Vide *Abridged Report*, pp. 35-39.

The foregoing are the main factors responsible for retarding the progress of Indian cultivation. Naturally the yield cannot be high, nor the produce of a superior quality, with the result that India's agricultural products cannot face world competition. This point will be taken up at some length later when we examine the case of each commodity separately;¹ but it might be said in passing here that the export of Indian wheat to the European market has ceased. Exports of raw cotton are, no doubt, growing, mainly due to the agreement of 1933 between the Millowners' Association, Bombay, and the British Textile Mission, and also through the Convention of 1934 between the Governments of India and Japan, in which, because they wanted to maintain—and increase if possible—the exports of their piece goods to India, Lancashire and Japan agreed to buy certain quantities of Indian cotton.^{2,3} But these are instances where favour is purposely shown to her cotton. It is not preferred on account of its superior merits. Both in Lancashire and Japan the cotton millowners are making changes and carrying out adjustments in their machinery so that Indian cotton can be used instead of American cotton. Half-yearly statistics, issued by the International Federation of Master Cotton Spinners and Manufacturers' Associations, show that while in the half-year ended January 21, 1935, American cotton used in the world's mills declined by 1,028,000 bales—from 6,479,000 to 5,451,000 bales—the consumption of Indian went up from 2,282,000 to 2,887,000 bales, and Egyptian increased from 481,000 to 520,000 bales. And Great Britain consumed 170,000 bales of Indian cotton, compared with 109,000 in the corresponding period 1934, and 56,000 in the half-year ending January 31, 1933. Again, jute is bought by the world because India holds a monopoly in that commodity. Even then its exports have been falling off, and substitutes are becoming more popular in foreign countries.

¹ See Chapter VIII.

² See *Review of the Trade of India, 1934*.

³ The Bombay-Lancashire Agreement having expired, efforts are being made to enter into a new agreement. And negotiations are in progress between the representatives of the Governments of India and Japan for the conclusion of a new commercial treaty.

It can be said in the case of the Indian linseed and groundnut only that they are really preferred abroad because of their quality; but they are faced with strong competition from South America and West Africa respectively. Thus we reach the conclusion that the production side of Indian agriculture is very weak and un-organized, if not actually chaotic. The average yield per acre is one of the lowest in the world, and the average quality not much different. The peasant, obviously, has to bear the brunt, and cannot always manage to make both ends meet.

The troubles of the peasant do not end with the poor yield and inferior quality of the produce. No sooner is the crop ready for sale, and in many cases before it has left the threshing-floor, than demands for different kinds of payments are made upon him. The landlord is anxious to get his rent. The revenue officials apply pressure to realize the land revenue and the *tagavi* loans which the *ryot* might have taken from the Government in the past. And the money-lender insists on the payment of interest on the loans he has been advancing from time to time. If the term of any such loan is expiring, the principal too would be due, or an extension would have to be obtained after propitiating the creditor with presents in cash or kind, or both, and very often with a few days of free labour thrown in. Then money is needed for domestic purposes. Small purchases are to be made for the family. Implements, livestock, and the house are to be repaired, bought, or thatched, as the case might be. This is the situation when the cultivator has gathered in his harvest. If the crop has been good, the market prices will be low, and he will not gain, or not much any way, by the big yield. On the other hand, if the crops have failed or proved unsatisfactory, the prices will be high, but he will not have any surplus to sell: thus he suffers both ways. Generally the peasant is without funds and resources to meet the various demands made upon him. He has no savings or money of his own, and most probably he is already indebted to the village money-lender. If a Co-operative Credit Society exists and he is a member, the chances are that, having obtained some loans in the past, it would be time for him to repay the same.

Even if he is not indebted to the society, and has not to repay any old loans, he would not be granted a loan for the purpose of meeting the pressing demands on him and to enable him to hold back his produce from the market for some time. Some agency or organization, preferably on a co-operative basis, is required to advance loans on the security of the commodities deposited in its own godowns. Such loans could be repaid later through the sale of the produce effected by the owner directly, or by the agency on his behalf. Arrangements like these could be satisfactory to both the parties, but unfortunately no institutions of this type exist at present.

What actually happens is that the peasant, finding himself hard pressed for money and having nowhere to turn to, decides to sell his produce soon after harvesting it. He realizes that by selling it at that time he would not get a good price because the markets are usually depressed soon after the harvests, and that it may mean actual loss to him. He knows that it would be sheer folly to sell it then. He is intelligent enough to comprehend that by keeping the produce back for a month or so he would stand to gain. He sees all these points, and understands their importance and significance, but he is helpless. He has no staying power, he has to meet the different demands and he has no one to finance him at that moment. He is virtually forced to sell. We can imagine the losses suffered and hardships created when we realize that the foregoing is applicable to an overwhelming number of cultivators. With the marketing of 90 per cent of the crop within a month or so, the prices fall heavily, involving the sellers into still greater losses. The produce is bought in the village, or in some minor market of the neighbourhood, by the consumers directly to a small extent, but mainly by the village grain dealers, or the agents of big merchants established at important centres. The latter start a chain of middlemen through whose hands the agricultural commodities pass before reaching the consumer. These middlemen store them, clean them (if necessary), and sell them when the price is favourable. As the cultivator sells in a hurry, he receives much less than what he would have got if he had

held back the produce for some time. He is thus imposed on at both ends.

These handicaps of the peasants are due to the fact that there is no agency or organization to look after the proper marketing and orderly selling of the agricultural produce. Even if the production side is strengthened and cultivation improved, the peasant would not gain much, as the benefits of better farming would probably be reaped by middlemen intervening between them and the ultimate consumers. It has been pointed out in the first chapter that the process of agricultural production cannot be regarded as complete without the sale of the produce. One-sided reform labours under great disadvantages. Side by side with progress in cultivation methods, an advance should be made towards joint sale of the produce. It has been said that India's salvation lies in her rural community; but where do we find a rural community? Rural population exists, but that is altogether a different thing. The word "community" implies an association of people having common interests and common possessions, bound together by laws and regulations which express these common interests and ideals, and define the relation of the individual to the community. Our rural population is no more closely connected, for the most part, than the shifting sands on the seashore. The peasant leads an almost entirely individualistic life. This is true with regard to the disposal of the produce as well, with the result that, being unversed in the marketing operations and unfamiliar with market conditions and its technique, he comes out second best after his encounter with the dealers. He is not in possession of any information regarding the supply or demand, nor is he trained in salesmanship. He is, moreover, likely to be particularly busy caring for one crop—ploughing, planting, or harvesting—just when it may be the most opportune time to market another. And when he has time to market country roads are often impassable.

Since effective production calls for a high degree of specialized knowledge, most farmers are unable to become specialists in marketing as well. They are often uninformed as to the type of product that the final consumers are most willing to purchase.

Under such circumstances it would be unfair to ask them to continue marketing their produce. We have already shown how uneconomical it would be for each peasant to undertake the functions supplementary to that of marketing. And it would be suicidal to put up the produce for sale without cleaning and grading and processing, too, in certain cases. This is to suggest that the *ryots* ought to be organized for the purpose of selling their produce. In the interests of the producers as well as of the consumers, there should be a clear-cut division between the cultivation and the marketing functions. It would mean better service, and may prove more profitable for the grower. Agricultural marketing, as it obtains in India to-day, can hardly be dignified by the title of "system." Far from seeking the most remunerative market for his produce, the average cultivator has to be content to submit to the terms dictated by middlemen, who are sometimes persons to whom he is heavily indebted. There is no incentive to improve the quality of his produce as there is little chance of his securing a higher price for it. If the financial depression has taught us anything, it is that steps must be taken to systematize marketing, that improvement in the quality and the grading of produce must be undertaken if the Indian agriculturist is to maintain his position in the world markets.

CHAPTER III

MARKETING DEVELOPMENTS

A BRIEF study of the general economic conditions of India—of rural India in particular—has now been made, and the need for a marketing organization has been discussed. Before passing on to consider in detail the system of marketing agricultural products as it exists at present, and suggest remedies, it is worth while to examine the development of marketing methods in the past, and the changes, if any, that have taken place from time to time. The subject of marketing as such has not received much attention from the travellers, biographers, and historians of the ancient, medieval, or even modern age. The writers of the economic history of India are, mostly, silent on this point. This has been due more to the absence of any regular and regulated markets of which any notice could be taken than to any desire on their part to omit dealing with this part of the agricultural study. There is very little on record to show how the trade in agricultural products was carried on. The official chronicles would not notice such matters, unless a breakdown of trade hindered revenue collection; and we do not recall anything of the kind. The Dutch and English records tell very little because the merchants bought manufactured goods rather than raw produce.

It is obvious that the more common practice, if not the universal one, in the pre-British India was for the grower to exchange his produce for the goods he required, i.e. the barter system. If the rent for the land was to be paid to the landlord, it usually took the form of payment in kind. Similarly, revenue was also paid to the rulers in kind. But this does not mean that money payments did not exist. Generally speaking, in Northern India the revenue was usually paid in cash in the thirteenth century, and thenceforward¹—except in places for a short time under Alauddin, and

¹ Vide *The Agrarian System of Moslem India*, by W. H. Moreland, 1929, pp. 37-38.

again under the Lodis. In South India, revenue was paid partly in gold and partly in produce according to local conditions (about the twelfth century). Later, under the Moghuls, the revenue almost throughout India had to be paid in cash. Orissa was a partial exception¹: there the collector had to sell rice; and probably there were other exceptions in Berar, etc.² The process of marketing was based on the isolated efforts of individual peasants to the same extent as, if not more than, to-day. The revenue represented one-third of the gross produce under Akbar, and its payment in cash naturally involved the quick sale of at least that much of the produce. Then some cash might have been needed by the growers for domestic expenses, i.e. for buying certain goods, for making pilgrimages, or for paying the money-lender. Thus it must have meant the actual sale of at least half of the produce soon after harvesting, say within a month or so. The inevitable result, the seasonal fall of prices, was bound to follow. In the thirteenth century there were in Northern India grain-dealers who bought for money in the villages, thus enabling peasants to pay the cash revenue, and sold what they had bought in the towns.³ There were also dealers (*hanjaras*) who carried on trade in produce so far as was possible, e.g. between Delhi and Malwa. But the peasants in those times were more backward, and organized business centres were almost non-existent. As there was no adequate market for the surplus produce, prices inevitably fell heavily; and a series of exceptionally favourable seasons (in Akbar's reign) was referred to as "threatening disaster."⁴ Communications were worse and lawlessness greater than at present. All these factors lessened the cultivator's chances of marketing successfully and of getting fair prices for his produce. He was at the mercy of the conditions of the village market; and large-scale transactions could not be undertaken either.⁵

By Aurangzeb's time the land revenue was increased to nearly

¹ Vide *Studies in Moghul India*, by J. N. Sarkar, 1919, p. 217.

² Vide *India at the Death of Akbar*, by W. H. Moreland, p. 126.

³ Vide *The Agrarian System*, p. 38.

⁴ *India at the Death of Akbar*, p. 126.

⁵ *Ibid.*, p. 90.

half of the gross produce,¹ thus necessitating the disposal of about three-fourths of the crop. In other words, after reserving some for home consumption and for seed purposes, the rest of the produce must have been sold off as soon after harvesting as possible. The picture of marketing of those times was thus not very different from that of the present day. Between the death of Aurangzeb and the establishment of British rule on a firm basis, i.e. from the commencement of the eighteenth to the end of the fifties in the nineteenth century—a period of more than a century and a half—India passed through a reign of terror characterized by political, social, and economic chaos. Naturally, trade and agriculture had their share of it. Fields and standing crops were trampled upon by the different warring forces, or were respectively turned into camps and used as fodder for their horses and beasts of burden. Grain was burnt up or confiscated by the enemy and the ruler alike. The ruthlessness of the revenue officials and the rapacity of the landlords left hardly anything with the suffering people. The peasantry was doubly unfortunate, inasmuch as all its possessions—implements, cattle, and grain—were a matter of common knowledge, and in times of raids nothing could be hidden away.

In 1874 Mr. P. J. White picturesquely remarked: "The profusion of harvest prices shows what a necessitous creature is your ordinary *ryot*. He cannot wait till after harvest until the grain-dealer shall pay him a price in some agreement with the average annual value of the produce. The poor helot of the soil is forced to sell at once, forced to flood an already full market, and thus with open eyes depreciate his own goods, because his, as well as his landlord's, first necessity is silver, wherewith to pay the rent and the revenue."² Although this was written sixty years ago, the whole description, softened down here and there, might be applied to the present day. The tenant is, by long-established usage and his own imprudence, dependent greatly on the grain

¹ Vide *The Agrarian System*, p. 135.

² *The Industrial Organisation of an Indian Province*, by Theodore Morison, p. 219.

merchant, who is generally a money-lender as well, or on the landlord with whom he deals for his seed, rent advances, often for his food and other necessities of life. There is no doubt that a general improvement of the market in which the cultivator disposes of his goods has taken place. The development of the country and the regular construction of roads and railways have been forces upon the side of the cultivator. Distances have been shortened, and different places—villages, markets, and towns—have been drawn nearer and rendered easily, or rather more easily, accessible. The spreading of a network of railway lines in the last quarter of the nineteenth century brought about a great unification in the prices of agricultural commodities in various parts of the country.¹ And the opening of the Suez Canal, in 1869, linked the Indian markets to the European, and subsequently to American, markets. These improvements in communication have certainly increased the bargaining power of the producer and put him in a competitive position, but they have affected only one aspect of the marketing problem. There has not been concerted action along the whole rural front to fight the demon of indebtedness, the curse of perennial poverty, the darkness of universal illiteracy, the evils of unorganized production, the wastes of inefficient distribution, and the losses of unscientific marketing. Isolated legislation has been enacted in the country. Halting and half-hearted steps have been taken from time to time, once in this direction, next in that, and the third time in the other. A co-ordinating and continuous policy has been absent. Uniformity and cohesion have been lacking in the sporadic attempts made towards the improvement of the agricultural industry of India.

A number of Commissions and Committees have been appointed at varying intervals—e.g. the Famine Commissions of 1880, 1898, and 1901, the Irrigation Commission of 1903, and the Committee of Co-operation of 1915—by the Government of India to investigate into the various agricultural problems. Minor bodies have also been set up occasionally by the Provincial Governments.

¹ *The Industrial Organisation of an Indian Province*, by Theodore Morison.

They made many recommendations for the improvement of agriculture, and for the promotion of the welfare and prosperity of the rural population. One of the results of the findings of the last Famine Commission was the development of the agriculture departments in the provinces. The co-operative movement was also introduced into India in 1904. Subsequently to the recommendations of the Irrigation Commission, Lord Curzon's Government launched a forward policy in matters of agricultural research and improvement. An agricultural research institute, an experimental farm, and an agriculture college were established at Pusa, in the province of Bihar, under the direct supervision and control of the Government of India. Later on, agriculture colleges were opened in different provinces. It must be said to the credit of these institutions that they did their best within the small resources and with the scanty staff placed at their disposal. The agriculture departments have achieved some success, mostly within the limits of experimental farms and research stations, but their influence has so far reached only a small fraction of the total population. With half a dozen agriculture colleges—not even one in each province—little agricultural education could be imparted to the teeming millions of India. Barely 350 students have been granted degrees and diplomas in agriculture in any one year. They were mostly absorbed in the agriculture services of the various provinces; hence not many went back to their villages to help in raising the level of agriculture. The colleges were inadequately staffed, with the result that they had to limit the number of students seeking admission. Moreover, the education provided, being of an expensive character, was beyond the means of the vast majority of the people. The establishment of local agriculture schools of an inexpensive type is long overdue.

The Royal Commission on Agriculture in India was appointed, in 1926, under the Chairmanship of the Marquess of Linlithgow. It was doubly welcome as agricultural marketing was specifically mentioned in the terms of reference.¹ Never before had it been

¹ The terms of reference were as follows: "Whereas We have deemed it expedient that a Commission should forthwith issue generally to

given any serious thought in India. The Commission, after instituting a detailed enquiry, submitted their report in 1928, and made comprehensive recommendations. They found that "However efficient the organization which is built up for demonstration and propaganda, unless that organization is based on research it is merely a house built on sand. In spite of the marked progress which has been made in many directions during the last quarter of a century, it is hardly an exaggeration to say that agricultural research in this country is still in its infancy. The claims of research have received a half-hearted recognition, and the importance of its efficient organization and conduct is still little understood."¹ True, there was the Central Research Institute at Pusa which, among other functions, was carrying on experiments with an intent of improving the strain of local wheat. The Sugar-cane Breeding Station at Coimbatore, South India, was also in existence. The Indian Central Cotton Committee, constituted in 1921, as the result of the Report of the Indian Cotton Committee of 1917-18, had been given definite legal status by the provisions of the Indian Cotton Cess Act of 1923.

But these efforts, besides being far too few, were poorly financed. They were merely isolated actions aimed at meeting particular situations arising on various occasions. Moreover, marketing problems had not been tackled at all. We have said in the previous chapter that marketing is a part of production, and that, in order to improve marketing, attempts should be made to deal with

examine and report on the present conditions of agriculture and rural economy in British India, and to make recommendations for the improvement of agriculture and to promote the welfare and prosperity of the rural population; in particular, to investigate: (a) the measures now being taken for the promotion of agricultural and veterinary research, experiment, demonstration and education; for the compilation of agricultural statistics; for introduction of new or better crops and for improvement in agricultural practice, dairy farming and breeding of stock; (b) the existing methods of transport and marketing of agricultural produce and stock; (c) the methods by which agricultural operations are financed and credit afforded to agriculturists; (d) the main factors affecting the rural prosperity and welfare of the agricultural population . . ."—*Report*, pp. (i) and (ii).

supply on scientific lines. In the United States of America, the importance of higher education in agriculture was realized, and the need for experimental work was felt as far back as 1862 and 1887 respectively. In that country, as well as in Canada and Australia, funds have been forthcoming, and revenues liberally provided for these objects. The indispensable part which agricultural education, research, and efficient and orderly marketing play in the rural development of a country has been fully recognized there. We hope that the time will come when we will be in a position to express the same opinion about India. We are already three-quarters of a century behind America. We have not yet made a real beginning. The Agriculture Commission made many valuable suggestions regarding all the aspects of Indian agriculture referred to it. A number of them dealt with marketing. The basic recommendation in that connection was the appointment of expert marketing officers on the staff of the agriculture departments in all the major provinces. In collaboration with the Co-operative and other departments concerned, these officers were to assist in the carrying out of the other recommendations. One immediate result of the Commission's Report, of great importance to agriculture in general, was the establishment, in 1928, of the Imperial Council of Agricultural Research, which co-ordinates the research work of the various stations and gives assistance in the form of expert advice and in money.

Closely following upon the heels of the Commission was the appointment of the Indian Central and the Provincial Banking Enquiry Committees to investigate the existing conditions of banking in India. The demand for an enquiry of such a nature was very old, and was voiced as early as 1890 at the first Industrial Conference. Later, the Royal Commission on Indian Finance and Currency and the Industrial Commission urged, in 1914 and 1918 respectively, the appointment of a committee to study certain questions connected with banking. From time to time resolutions were also moved in the Central Legislature to the same effect. But the Government was postponing the institution of the enquiry on one ground or another. At last the Central Banking Enquiry

Committee was appointed in 1929.¹ The Provincial Enquiry Committees were constituted in the same year as component parts of the main scheme, and had identical terms of reference. They submitted their reports in 1930, while the Central Committee reported in the following year. Marketing and movement of crops were investigated as a section of rural finance. Broadly speaking, the Indian Central Banking Enquiry Committee supported the recommendations of the Agriculture Commission and of the various Provincial Banking Enquiry Committees for improving and organizing agricultural marketing. It was, further, of opinion that proposals for the establishment of Provincial Marketing Boards should be examined by Provincial Governments in connection with the creation of regulated markets by provincial legislation as recommended by the Agricultural Commission. In addition to these two most important ones, twelve other recommendations, either supplementary or complementary in character, were made by the Committee with regard to marketing.²

The Provincial Economic Conference, consisting of Ministers and officials, and called by the Government of India in April 1934, discussed the question of marketing. "There was general agreement at the Conference that, of all practical measures for improving economic conditions, an intensive programme to develop marketing facilities for agricultural products (both crops and livestock) offers the best immediate prospects of substantial results." Afterwards,³ news began to filter through that a Marketing Staff was to be appointed by the Central Government. The scheme was to be an experimental one, and on a restricted basis. Something was at last to be done to relieve the distress of the

¹ The terms of reference were as follows: "To investigate past records and existing condition of banking in India, including the organisation of the Money Market, and to consider the steps, if any, that are feasible and desirable under the following main headings: (a) the Development of Banking with a view to the expansion of indigenous, co-operative, and joint-stock banking with special reference to the needs of agriculture, commerce, and industry; (b) . . . ; (c)"—*Report*, vol. i, part i, p. 5.

² *Ibid.*, pp. 507-508.

³ Government of India Resolution, No. F.-16 (1)-F. 34, dated May 5, 1934.

agriculturist by helping him in the marketing of his produce. In January 1935 and onwards the details were announced by the Government of India: a Central Marketing Staff as attached to the Office of the Imperial Agricultural Research, consisting of an Agricultural Marketing Adviser, seven Senior Marketing Officers, and ten Assistant Marketing Officers, was constituted by a resolution of the Government of India in the Department of the Imperial Council of Agricultural Research.¹ The investigation work in connection with the scheme for the improvement of marketing in India is to include a series of marketing surveys with reference to the more important crops and animal husbandry products; and the marketing surveys, when completed, will set out in detail the present system of marketing the commodities concerned, not only in each of the provinces separately, but in respect of inter-Provincial, inter-State, and foreign trade so as to provide an all-India picture of existing conditions, and a common basis for future progress. It will also be the duty of the marketing staff to ascertain the profits accruing to the various functionaries concerned. Where there is a superfluity of middlemen, the causes will have to be analysed. It may be, for example, bad communications or other factors restricting the freedom of the cultivator in the disposal of his produce. The planning, direction, and the interpretation of the marketing surveys will be the responsibility of the Central Marketing Staff, and the work will be carried out in close co-operation with the provincial marketing officers.

The collaboration of local governments in establishing regulated markets was essential, and it was a matter for satisfaction that the resolution enjoined upon the provincial administrations to engage the necessary staff. The Agriculture Commission included the whole of British India in its remarks and recommendations. The agricultural situation, and the conditions of the peasants and their difficulties were found to be much the same in all the provinces. This was borne out by each Provincial Banking Enquiry Committee, and the recommendations *re* "Marketing and the Move-

¹ Government of India Resolution, No. F.-16-M./34, dated January 10, 1935.

ment of Crops" were more or less similar. Moreover, the local governments, in the Economic Conference of 1934, were in general agreement about the desirability of starting an intensive programme for developing the marketing of agricultural produce. Therefore, in view of the urgency of the matter and to make the all-India marketing surveys as effective as possible, the Government of India agreed to make provision from the Central funds for a period of five years for expenditure by the local governments on a nucleus of the provincial marketing staff, consisting of a limited number of marketing officers of the junior grade. The total grant for the provincial staff was fixed at Rs. 2,00,000 per annum, which will be placed at the disposal of the Imperial Council of Agricultural Research in the same manner as the other grants made by the Government of India to the Council.

In March 1935 the Imperial Council convened a joint conference of the Central Marketing Staff and Senior Marketing Officers in the Provinces and the Indian States. The Conference discussed in detail the lines on which marketing work should be conducted, settled the synopses on which the reports on marketing surveys were to be based, and prepared questionnaires for the commodities to be investigated.¹ All the main agricultural products were to be finally included in the scheme, but in the beginning only those of national importance—viz. rice, wheat, ground-nut, linseed, tobacco, fruits, milk and milk products, cattle, eggs, hides and skins—were to be studied. Thus investigations of marketing conditions are being pushed on, and the subsequent programme of development work—e.g. the formation of marketing organizations—will depend upon the results of these enquiries. No separate reports have so far been issued by the marketing officers (Central or Provincial); but some of the reports of the agriculture departments for 1934-35 contain brief accounts of the activities of the marketing sections. It is too early, however, to review the work of the staff as it was appointed only recently—some late in 1934, and others early in 1935. Nevertheless the few months for which information is available seem to have been devoted to the spadework—visits and tours, organization and

¹ Vide *Proceedings of Conference*, March 5-9, 1935.

propaganda, etc.—necessary to the setting up of new offices, and before undertaking wholesale surveys.

The system followed in the various parts of India is more or less uniform, with modifications required by local circumstances. As an illustration, we explain below the organization of the marketing branch of the agriculture department of a major province. The United Provinces Government was the first to appoint local officers to collaborate with the Central Marketing Staff. A series of marketing surveys with special reference to the more important commodities has been planned out. The Provincial Marketing Officer has been placed in charge of the survey work connected with plantation and special crops, including fruits. There are three Assistant Marketing Officers under him, with their headquarters in three prominent business centres. One of them is in charge of the investigation with reference to oil-seeds and fibres, with his headquarters at Cawnpore, where these commodities are in great demand owing to the existence of cotton and oil mills. Cereals is the province of the second marketing officer, with his headquarters at Hapur, the biggest grain market in the United Provinces; while the third assistant is to make a comprehensive survey of livestock, poultry, dairy products, etc., with his headquarters at Etah. The local government, having agreed to the adoption of the marketing scheme, will receive Rs. 20,000 per annum from the Government of India, and will have to pay the salary of the Provincial Marketing Officer from its own funds. As this is the first organization of its kind, and considerable enquiries will have to be undertaken, it is not surprising to be told that it will take not less than two years for the completion of surveys.

The marketing surveys when completed will set out in detail the present system of marketing of the commodities concerned, and without committing the Government will also formulate proposals regarding any improvements in marketing organization in the various areas which may appear to be necessary and practicable. It is expected that the survey work will materially benefit the cultivators by improving and widening their markets, as well as safeguard the interests of the consumers. The scheme broadly follows the recommendations of the Royal Commission on Agri-

culture which were endorsed in general by the Central Banking Enquiry Committee, and steps will now be taken to give effect to them. The question of establishing additional crop committees is still under the consideration of the Government. In the meantime it has been decided, however, that the other recommendations should be given effect to immediately in accordance with the scheme of work prepared by the Marketing Expert on the staff of the Imperial Council of Agricultural Research.

Simultaneously, the Government of India decided, in 1935, to set aside certain sums of money each year for a campaign for the development of the vast rural areas it governs. Out of this fund, varying amounts are placed at the disposal of the Provincial Governments which are at liberty to organize their own schemes of rural uplift. The first report¹ on the progress of these schemes makes interesting reading. In the United Provinces a concentrated drive is being made for the improvement of rural sanitation and hygiene. And a large number of night schools have been opened in the province. Fruit culture has been organized, and plants and seeds have been supplied. The Punjab is undertaking the consolidation of agricultural holdings in great earnest. Fruit culture is being helped, and a canning-hall equipped with machinery has been constructed. Similar work is going on in other parts as well. In Bengal, for instance, the water-supply scheme provides for the establishment of tanks, ring wells, masonry wells, and tube wells. Emphasis is being laid on Better Living Societies. In the Bombay Presidency, health units have been established: provision for medical relief has been made by means of mobile dispensaries. In Madras, new roads connecting important villages and trunk roads are so much appreciated that the public, in some cases, has volunteered labour and free gifts of land for their construction. This is just the beginning, and attempts have necessarily to be made on a small scale. It is hoped, however, that the work will be extended and intensified as early as experience permits.²

¹ Published by the Government of India, 1936.

² But actually no further funds have been provided by the Government of India for 1937-38.

PART II

PRESENT CONDITIONS

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CHAPTER IV

MARKETS AND MARKETING PROCEDURE

INDIA, as we have seen above, is a land of small-scale agriculture; and, barring jute and cotton, her crops are not grown primarily for the foreign markets.¹ The enterprise of each peasant is more or less independent of that of the rest. He works on an individualistic basis, divorced from the principle of "self-help through mutual help." The purchase of seed, implement, and manure, the borrowing of capital, the processes of cultivation, the harvesting operations, the preparation for the market, and lastly the disposal of the produce are, for the most part, all carried on independently by each cultivator. He has not learnt to unite and co-operate in order to perform these functions more easily, quickly, and cheaply. But at the same time he is an expert in his own line: he knows the details and fine points of cultivation, and realizes fully what crops are more suitable and more paying than the others. He grows crops for what they pay, and—although he is ignorant of the interplay of supply and demand—is constantly interested in the fluctuations in their prices. If certain crops are no longer profitable, or others are more paying, despite the various handicaps, he tries to switch on to the more lucrative ones, showing commendable enterprise. It is obvious that any and every crop cannot be grown throughout the country. Nature imposes its limitations in the form of soil, rainfall, and climate. Considerations of available capital, irrigation facilities, processing, and ultimate sale also arise. Other things being equal, those crops

¹ "The importance of the products of Chinese and Indian agriculture in international trade, though great, by no means corresponds to the numerical strength of the population engaged, for the obvious reason that conditions of life on the tiny holdings which account for the greater part of India and the non-desert area of China tend to production mainly for the consumption of the cultivator and the needs of the local markets." —*World Agriculture*, p. 159.

are raised which grow best in the particular environments, and which pay most. That is why we find that shifting of crops has been going on for centuries in India. Some areas are peculiarly suited for certain crops, with the result that the cultivators have come to specialize in them.

Specialization in agriculture, with occasional change-overs, has existed in India since remote ages. "Specialization was not indeed entirely unknown, for Bengal supplied sugar to many parts of India, while the production of indigo was to a large extent concentrated in two localities, Biana near Agra, and Sarkhej in Gujrat, . . ."¹ The tendency towards specialization is evident at the present time more than ever. It has been promoted by competition from abroad, and has grown along with the development of the means of communications, both internal and external. The possibility of quick, cheap, and easy transport over long distances provided better selling prospects and more profits, leading in turn to intensive cultivation. The produce can now reach distant places, thus increasing the range of marketing. The outlying parts get a chance to compete, and new tracts are brought under cultivation. When intensive agriculture starts, it should be taken as a sign of specialization. Gradually, however, even the most stable conditions change, and a reshuffling becomes necessary. New demands arise and old ones disappear, or become less important. New sources of supply come into the field, and alternative supplies and substitutes are created. These circumstances lead to a readjustment of the different productive factors. It is exactly this condition of affairs that Indian agriculture is passing through at present. The Punjab and the United Provinces are the two chief wheat-growing provinces. Punjab specializes in cotton also, while the United Provinces is important for sugar-cane and barley as well. Bihar and Orissa grow mainly rice, and comparatively small areas are under cane and jute. Bengal specializes in jute, though there is extensive cultivation of rice—mostly for home consumption. Oil-seeds, millets, and pulses are grown in large quantities all over India; but the last two and rice are usually consumed locally.

¹ *India at the Death of Akbar*, p. 105.

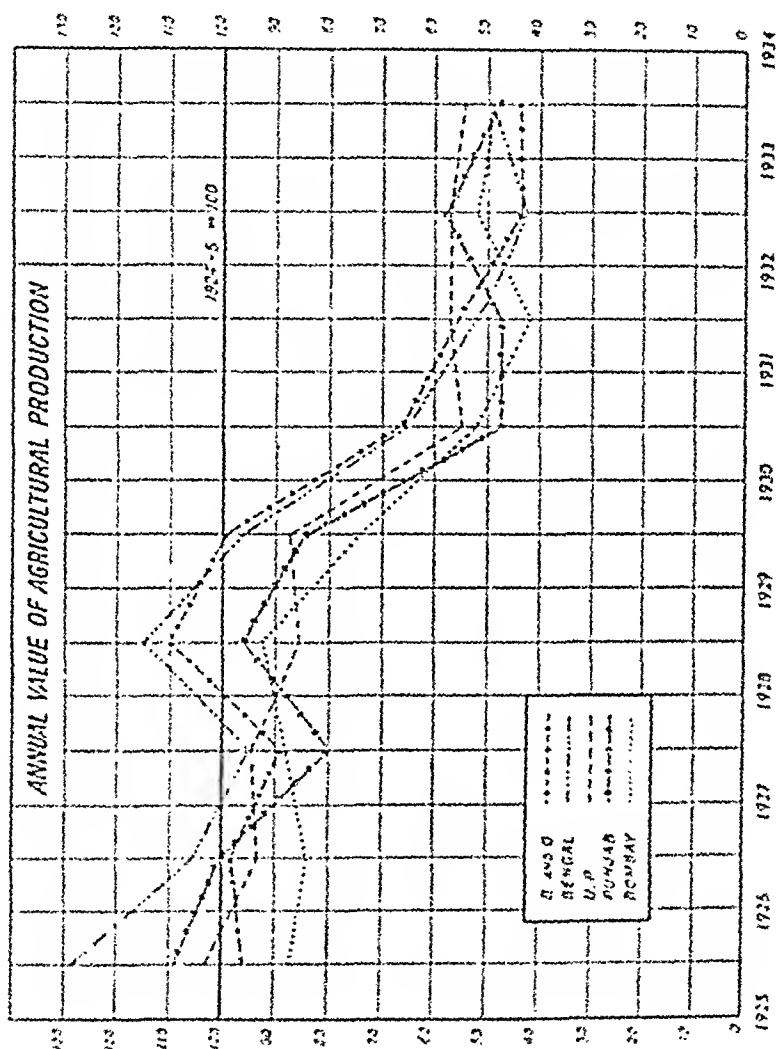
The country has more or less ceased to export wheat, and the world demand for jute has fallen very appreciably. Therefore the growing of these two commodities on the old scale is no longer regarded as good business, and efforts are being made to find out the most suitable substitute crops. It can be expected that on their introduction specialization will ultimately be achieved in the cultivation of the new crops as well.

Specialization need not necessarily imply the adoption of one commodity only as the most favoured one, nor concentration upon the production of that one alone. It can simultaneously be applied to a number of crops. "There are innumerable degrees of specialization possible, ranging from concentration on one single product to the most complete diversity."¹ In India, specialization exists side by side with, or in spite of, diversification of agriculture. On account of the vastness of the country, particularly of the administrative provinces, the climate, soil, moisture, and rainfall vary greatly. Hence a number of staples are produced within the same political divisions; but where the growing conditions are distinctly favourable, specialization has taken place. It is true that the internal economies, the result of the application of specialized production to large farms, are not capable of realization in the presence of a variety of crops grown on small plots of land. But this very diversity is the redeeming feature of Indian agriculture. Probably the most important weakness of one-line specialization is that excessive reliance on one product only involves heavy losses in times of falling prices. If the demand for that commodity goes down, the farmers have no alternative crop to fall back upon. Either they continue growing the same crop, in which case the additional supply will bring down the prices still further, or they have to remain idle, because the one-line specialization has not permitted the development of other staples. During the present economic depression the farmers of North and South America have suffered very severely on account of intensive specialization in wheat, cotton, and coffee. The Canadian farmers were too dependent on wheat. They have been advised to develop stock-

¹ *Agricultural Economics*, O'Brien, p. 61.

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breeding and dairying in order to have varied sources of income. In the United States the cotton-growers were mostly dependent upon one crop only. More diversified farming was advocated for



the southern states, and they were urged—by the now defunct Federal Farm Board—to grow food for themselves and fodder for animals. The Brazilian cultivators were asked by their Government to give up one-crop agriculture and to take up cereal crops,

market-garden products, and fruits, stockbreeding, and agricultural industries.¹

In India the growers of jute in Bengal, wheat in the Punjab, and cotton in Bombay, fared rather badly as compared with the cultivators of the United Provinces; for example, where there was less one-crop specialization and more diversification. The accompanying table supports this view.

*Index Numbers of Annual Values of Agricultural Production**

Provinces	1924 -25	1925 -26	1926 -27	1927 -28	1928 -29	1929 -30	1930 -31	1931 -32	1932 -33	1933 -34	Maximum Variations (1-2 below)
Bengal ..	100	129 ¹	105	95	115	96	65	52	42 ²	49	-87
Bihar and Orissa	100	96	98	89	110 ¹	99	66	56	43 ²	44	-70
United Provinces	100	103 ¹	93	94	85	87	55	57	57	54 ²	-49
Punjab ..	100	109 ¹	100	80	96	84	47 ²	47	58	48	-62
Bombay	100 ¹	87	84	88	92	74	52	42 ²	52	49	-58

* For detailed working, see Appendix B.

Absolute accuracy is not claimed on account of the defects in the statistics available, as has been made clear in the footnotes included in Appendix B. But the trend of the index numbers can safely be taken as correct. Oil-seeds, being commonly cultivated over the whole land, have been excluded from our study: moreover, information about the prices of the various seeds is not satisfactory for our purposes. It will be seen how the annual values of agricultural production in Northern India—Bombay has been added as an additional illustration—have varied during the ten years 1924-25 to 1933-34. A study of earlier years was not possible as the harvest prices for the different commodities were not published in the previous years. Analysing the figures, we find that in the first two years high prices of jute brought prosperity to

¹ *Agricultural Situation*, I.I.A., 1929-30, 1930-31, 1931-32.

Bengal, whilst later it is seen fighting hard against the depression. When prices began to fall there were no other alternative crops to fall back upon, with the result that the downward trend could not be checked. The Punjab and Bombay were also unfortunate. They had specialized in commodities—wheat and cotton respectively—which had to face world competition. Thus the Punjab and Bombay were more disadvantageously placed than Bengal, which, on account of the monopoly of jute, could resist for a few years the universal onslaught of agricultural crisis. Together, these three provinces and Bihar and Orissa show a vast diminution in the value of agricultural production. Bihar and Orissa was apparently in a more enviable position as compared with the United Provinces. When the prices of jute were high, it was benefited thereby; but when that advantage no longer existed, after 1929-30, it suffered heavily. The greatest weakness in its agricultural system was the relatively small production of "money crops." The largest area is under rice, which is grown mostly for local consumption, and does not ordinarily enter in inter-provincial trade. The cultivation of wheat in Bihar and Orissa cannot be called important when it is compared with that of the Punjab, for example. Similarly, its output of cane and jute does not amount to much as against that of the United Provinces and Bengal respectively. In fact, agriculture in Bihar and Orissa cannot be termed "diversified," as it has a strong bias in favour of one particular crop, rice; nor can it be classed "specialized," as the crop in question is not a commercial one. The only province of Northern India that presents a fine example of diversification or, to be correct, of wider specialization of agriculture is the United Provinces. It grows extensively a large number of crops, and many (wheat, cane, and barley) are essentially of a specialized nature, being meant for the market rather than for the home.

From the table and the attached graph (p. 84) it might be erroneously concluded that Bengal, or even Bihar and Orissa for the matter of that, fared better than the United Provinces throughout the period. During the first few years they certainly did, through their monopoly of jute and the consequent high prices obtained;

but when the fall of prices came they were hit the hardest. The difference between the highest and lowest index numbers (last column of the table above), during the period under review, was in the case of Bengal 87, Bihar and Orissa 67, Punjab 62, Bombay 58, and United Provinces 49. So the diminution in the annual values of agricultural production, from the highest point reached in the whole period, was the greatest in Bengal, which specialized in one money crop only, and it was the least in the United Provinces, where specialization in a number of crops and consequent diversification existed. In the course of the present investigation the aspect of weather, elements, and favourable or unfavourable harvests has been ignored. No doubt they play a supreme part in the agricultural industry; but this attempt has been made with a view to show that, while monoculture may bring considerable profits during an era of high prices, stability in farm enterprise can only be obtained through the specialized production of more than one staple commodity. If a judicious balance is maintained between different crops, by proper care and attention, the chances of catastrophic losses are likely to be minimized at the time of trade fluctuations. In the United Provinces, for instance, production can be diverted from one crop to another in accordance with the price changes, and in this way the most profitable system of agriculture can be adopted. Again, in India, there is a clear-cut division between the different seasons which does not permit the growing of crops at will and at any time. *Rabi* crops cannot be produced during the *Kharif* period, and vice versa. Hence specialization in one product only would mean enforced idleness of the cultivators for a large part of the year; and one harvest only will introduce greater risks, specially during a period of fluctuations in yields and prices. Further, the present absence of large farms would put additional difficulties in the path of one-line specialization, so it is neither practical nor desirable for India to change the existing basis of her cultivation. Advancement can be made, and specialization of production can be achieved on the whole agricultural front, diversified as it is to-day. In this way only can the dangers of monoculture be eliminated.

We have seen in an earlier chapter that Indian agriculture, on the whole, is backward as compared with agriculture in the West. It follows that specialized markets are very few, and even those which do exist serve as central stations for the collection and distribution of the various products of the neighbouring areas. Such markets may have acquired the reputation for dealing in particular commodities. For example, the peculiar fitness of the surrounding tracts for growing some crops better than elsewhere, comparatively superior communications, nearness to the consuming population or distributing points, and the location of different factories can be responsible for creating specialized markets in the sense that they deal mainly in certain agricultural products. These markets can be more appropriately termed "organized," as against the "unorganized" village markets with which we will deal later. In every province of India a few organized markets exist for the staple commodities. They, too, were formerly unorganized, although occupying an important place in the marketing system of the country; but gradually the need of organization and consolidation was felt by the local merchants. Before the various associations were formed and their committees appointed, the merchants used to trade without any set rules for regulating transactions. Not much attention was paid to uniformity in business methods and practices. No agency for the mutual settling of accounts—a clearing-house—existed, nor were there any definite standards for the different qualities of products. The result is obvious: it gave rise to disputes, litigation, and ill-feeling. This applied with greater force in the case of speculative deals. The unwritten laws were ineffective in coping with the ever-increasing business. Conventions could not be enforced. After some time the merchants became wiser and started forming trading associations: since the War this tendency has become very manifest. Chambers of Commerce and Associations of Traders were started. They had shares, and were registered as public companies under the Indian Companies Act. Their objects included the promotion and protection of trade, commerce, and manufactures; the establishment of just and equitable principles in trade, and the formation of

codes of practice to simplify and facilitate transaction of business between merchants; the maintenance of uniformity in rules, regulations, and usages of trade, and the performances of other allied functions. They have drawn up detailed rules for the conduct of business. In some places separate institutions have been formed both by the traders and the brokers. Generally speaking, more than one Chamber or Association exists in the different organized markets, and sometimes they are rivals to one another. Most of them are efficiently managed and have proved very helpful and useful.

Because of the absence of uniformity, unusual difficulties are encountered in the matter of the classification of the commodity markets in India. At the top are established the Chambers of Commerce and Associations of Merchants in the port towns and big industrial centres, viz. Calcutta, Madras, Bombay, Karachi, Cawnpore, Ahmedabad, and Lahore; but those bodies see to the general regulation of commerce and to its safeguarding rather than to the supervising of individual transactions, unless they are formed specially with that object. Then come the wholesale markets scattered over the whole land. Difficulties arise at this point, as all the markets, whatever their size and organization, are universally known as *mandis*. Many, but not all, of the big wholesale markets have some regular organization, and their essential features are mostly similar. But the rest—including the town and city *mandis*, the small wholesale and the rural markets—are not controlled: the market-places are looked after by their owners, and the buyers and sellers are left to negotiate deals between themselves. It is not possible to say, for example, that all the wholesale markets, with a certain amount of annual turnover or dealing in a particular commodity, are run and managed on identical lines; or that Associations have been set up in all cases. The classification we have adopted is necessarily an empirical one. The prominent commodity markets in Northern India are the following:

Province	Names of Places with Markets	Principal Com- modities dealt in
1. Punjab	Lahore, Kasur, Ferozpur, Amritsar, Batala, Ambala City, Rohtak Lyallpur, Sargodha, Okara, Chichawatni, Multan Sonepat	Wheat Wheat and cotton Gir (raw sugar)
2. United Provinces	Agra, Aligarh, Hathras Meerut, Muzaffarnagar, Chandausi, Hapur, Hathras, Ghaziabad, Baghpat Bareilly, Shahjahanpur, Pilibhit, Basti, Gorakhpur Cawnpore	Cotton Wheat Gir and sugar Sugar, Gir, cotton and oil-seeds
3. Bihar and Orissa	Patna, Muzaffarpur, Bhagalpur, Darbhanga, Gaya, Cuttack, Champaran, Saran Purnea, Cuttack	Sugar and rice Jute
4. Bengal	Narayangunj, Serajgunj, Sarisabari, Chandpur, Chittagong Dinajpur, Bakergunj, Sunderbans Calcutta	Jute Rice Jute, rice, oil-seeds, and sugar

N.B.—No separate markets are established for oil-seeds in any province. They are marketed in common with wheat and other grain.

In the light of previous remarks, and in the absence of any Government publications to that effect, the list cannot be regarded as complete. Nor is it possible to say how many of these markets are managed through the "organized" efforts of the merchants.

In the Punjab, Lyallpur and Amritsar are typical examples of organized markets. Both have great importance as *mandis*. Lyallpur is a big centre for wheat, as well as for cotton and oil-seeds. Two trading companies have been formed there to regulate the business, the members being the *arhtias* (i.e. commission agents). *Dalals*

(i.e. brokers) can get themselves registered on the payment of deposits of Rs. 200 each, and have an association of their own to safeguard their interests; but they cannot become members of the companies. All future transactions entered into between the various *arhtias* and negotiated through the *dalals* are registered with these companies; thus a constant check is maintained on the dealings in the market. Even the outside dealers prefer to work through these bodies. The two companies perform the same functions, and compete with one another. In each of them the member deposits Rs. 150 as security, and he is then entitled to deal up to one hundred bags of wheat. If he intends to trade in a larger quantity he has to increase the deposit *pro rata*. Every day when the market has closed, all the future transactions of the members are entered in the books of the companies, and those that have matured are cancelled by adjusting the individual accounts. If a certain *arhtia* has lost over a certain deal, the amount of loss will be met out of his deposit, and the next day the merchant will have to place an equal amount in his deposit so as to maintain the latter at the original figure. Interest at the rate of annas 8 per cent per month is allowed on the deposits. A fixed part of the profits made by the members on their daily business is credited to the account of the respective association for its recurring expenses and charities, and is known as the commission. Amritsar is another big market for the agricultural produce. It has now lost its importance in cotton because a number of ginning and baling factories have been started in the vicinity: instead of taking all the saleable cotton to the market, the growers sell it direct to the mills. But Amritsar is still important for its wheat trade, and, if not first, is second to Bombay only in the wheat futures. The Traders' Guarantee Trust Co., Ltd., and Traders' Association are established to safeguard the interests of the traders of all agricultural commodities. With minor differences the method of working and the rules and regulations are similar to those of the Lyallpur associations. Some rival concerns also exist.

Delhi is the only prominent market in the province of that name. Although wheat is cultivated almost over the whole of the

United Provinces, it is more important, both from the point of view of quality and yield, in the Meerut and Rohilkhand divisions, situated in the north-western region comprising the upper portion of the Ganges-Jumna Doab. Cotton is mostly grown in the south-west, particularly in the Agra division. Naturally the largest and the best organized markets are to be found in these areas: Hapur is the leading *mandi* for wheat, and Hathras for cotton—dealings in other agricultural products also take place, but are not of great value. There are markets for these two commodities in other parts of the province as well, but they are small, especially for cotton, as it is not grown much outside the south-west region. Hapur is the biggest *mandi* in the whole province, and together with Amritsar has snatched from Bombay the place of honour in the matter of supremacy in the wheat futures. Chambers of Commerce and some minor bodies are functioning in the interests of the traders. The markets mentioned above are in constant touch with Bombay and Karachi, and through them with London, Liverpool, and Chicago. Cawnpore, being an industrial centre, is another foremost market in the United Provinces for grain, cotton, oil-seeds, and sugar—both white and raw.

Calcutta is, probably, the greatest market of all—mainly for jute, oil-seeds, sugar, and rice. At Calcutta, and in a lesser degree at Cawnpore, a number of Chambers of Commerce are established. They are highly organized and are very efficient in their work. They represent the most advanced types of commercial associations to be found in India, and are based on the European and American models. Near the steamer stations in Eastern Bengal there are many collecting centres for jute, e.g. Serajgunj, Narayangunj, and Mymensingh; but nearly all the jute finds its way ultimately to Calcutta, reaching there mostly by water. A certain portion of jute is exported direct from Chittagong, but it does not amount to much. The markets and *mandis* mentioned here—Lyallpur and Amritsar in the Punjab; Hapur, Hathras, and Cawnpore in the United Provinces; and Calcutta and others in Bengal—are the most important ones in their respective provinces. The extent of specialization varies in the different cases, but all

present a few common features. These institutions and their activities show that the merchants are well organized, and are moving with the times. The membership of the Chambers of Commerce and of the various associations which manage and control the markets is generally confined to merchants only. The brokers are studiously kept out, but they can get themselves registered on payment of some charges, and on maintaining deposits. The growers of the produce and the petty dealers who bring it to the wholesale markets are not admitted into the bodies responsible for making the rules for business. The result is that such sellers think that the merchants frame the regulations in a selfish spirit, and that their own interests are ignored. Through these feelings the village people become indifferent towards the organized markets. The ground is thus prepared for the peasants to stay away from the *mandis*, and to leave the marketing of their produce in the hands of the middlemen.

It is interesting to study the village markets, scattered over the countryside, and primitive and unorganized though they are in almost every respect. The distances being long, and the masses still cut off from the cities and big towns, the urban markets are not situated within the reach of every cultivator, or even of an appreciable number of them. In some large villages are found a few local markets—*marts* might be a more suitable term for them—where the producers take their commodities for disposal. The term “market” is ordinarily used in a very wide sense. The village market should not, strictly speaking, be called a market, as no buildings or structure is used for housing the dealers, and no agents exist who may specialize in this business, and through whom transactions may take place. These markets involve bazaar-like dealings rather than organized trading. The purchasers are mostly the inhabitants of the neighbourhood, buying for home consumption, although a local *bania* or two may also be present. The transactions are usually on a very small scale—in terms of a few rupees and seers, and seldom in maunds. The bargains in all cases are on an individual basis and the result of long haggling on both sides. The market is held once, twice, or thrice a week

in the open, or under some shade, as the weather may demand. The produce is heaped in its entirety on some gunny cloths, dirty sheets, or country-made blankets: it remains exposed to the elements, the flies and insects, stray dogs and crows of the whole locality. The quality, already poor, further deteriorates owing to the continuous addition of dust and dirt by the wind. There is, generally, not even a shed in the market place. Sometimes a few earthen platforms are put up to enable the sellers to sit above dust and mud.

In most cases, the market land is owned by a *zamindar*, who collects a small rent, in cash or kind, from the occupants. In a few places it may belong to the village *panchayat*, or to the district board, which charges cash rents to the occupiers. These markets are essentially "unorganized," but they do serve the useful purpose of providing a common meeting-place for the buyers and the sellers. Without them the small producer could not keep in touch, even in an indirect and a remote way, with the merchants at distant points. And, though the countryside markets are situated in the rural areas, the prices ruling there are, in the long run, influenced by those prevailing in big markets. No market news are issued, nor do good communications exist with the centres of trade, but tidings travel far in India. Most of the travellers in the countryside are villagers themselves, and many of the business men are agriculturists as well. If not, they are concerned with the prices of the agricultural commodities in their capacity as consumers. In any case, the whole of the rural area is interested in the transactions, and news is passed on by word of mouth; thus the prices in the villages are adjusted to those current in the *mandis*. Moreover, the few bigger farmers who visit the markets frequently, and the *barias* who also sell there, form the sources of information for the villages. Otherwise, the cultivators seldom make it a point to ascertain the market rates; and, even if they did make an attempt, they would not find it possible, under existing conditions, to remain in daily contact with the centres of trade and commerce.

The village markets are neither efficient in working nor broad

enough in scope. They are insufficient in number, and involve long and arduous travels over rough and unmetalled roads. Very often there are no roads at all, but just tracks, which are muddy for four months and dusty and full of ruts for the rest of the year. The process of marketing cannot be expected to develop unless markets—organized, efficient, and situated at short distances—exist. They should provide facilities for the performance of the various marketing functions—storage, transportation, grading, sorting, etc. The advantages of organized marketing will be felt only after the markets have been established. The people would watch the transactions in such markets and come to know that better prices might be obtained if they sold their produce there. Gradually, this realization would persuade them to take part in the market operations, and before long they would permanently join the institution. Conversely, it may be said that there should be some evidence of the tendency towards marketing before markets can come into existence. Let there be a demand and markets will spring up. If the idea of marketing does not prevail what can the organizations do? They can function only if their services are required. They cannot prove their worth unless they are given an opportunity. This is how Indians have been arguing all these days—in a circle. But, "it is just this interplay of forces between markets and marketing that constitutes the most purposeful and fruitful vantage point from which to attack an analysis of the marketing institution. . . ."¹ The question that naturally arises here is how to make a start. Who should do it, and when? An answer is given to this question in the next part of the present study.

Large portions of the crops are sold in the village markets by the peasants. From inquiries instituted, the following figures have been obtained of the produce sold there. The ratios differ from one locality to another within the same province; therefore, the figures should not be regarded as absolute: but at the most, they may vary between 5 and 10 per cent.

¹ *The Marketing Institution*, by R. F. Breyer, p. 55.

*Percentages of the Different Crops Sold in the Villages and Village Markets**

Province	Wheat	Cotton	Oil-seeds	Jute	Sugar-cane
Punjab	60	35	70	—	Nearly all the produce is sold to the sugar mills or presses without being taken to any market
United Provinces	80	40	75	—	
Bihar and Orissa	90	—	85	90	
Bengal	—	—	85	90	

* Vide Scheme of Investigation, Appendix A, *infra*.

It should be mentioned at the outset that the Punjab peasant is better off than his compeer elsewhere. His income is larger, resulting in an improved standard of living, and on the whole he has more staying power. The produce there is of a superior quality—particularly wheat and cotton—and the yield is higher. The livestock are also of a stronger breed. These factors and a comparatively large crop help the Punjab grower to take his produce to more distant markets. Consequently, the percentages of the produce sold in the villages of that province are the least. Let us now examine some exceptional features of the staple products tabulated above. No account has been taken of the trade in rice, as that commodity is not generally exported from one part of the country to another. The Punjab is not a rice-eating province, nor does it grow it. The United Provinces usually imports small quantities from and, in the case of Burma rice, through Bengal. Bihar and Orissa normally exports some, but this is set off during periods of scarcity, when it is compelled to import. Bengal, on the whole, imports substantial amounts from Burma both for itself and for supplying other provinces. Then sugar-cane is mostly supplied to the sugar mills of the neighbourhood. In the case of modern big mills, the growers enter into contracts to supply cane either directly to the management or through contractors. If such sugar factories do not exist in certain areas, then the local presses—making *gur* and brown sugar and run on indigenous lines—buy the cane. In this way, most of the cane is

sold to the manufacturers of sugar without its passing through the hands of a number of middlemen. A similar tendency is noticeable with reference to cotton as well. The reason why the proportion of cotton sold in the villages is smaller than that of other produce is that gins and weaving mills are usually situated in the midst of the growing areas. One of the main objects of the scientific management of industrial concerns is to locate the factory near the supplies. The producers of cotton find it convenient to sell direct to the gins and mills, because of the short distances involved. On the other hand, the percentage of jute sold in the villages is very high indeed. Nearly all the jute is collected from the villages by the agents of the dealers, or by travelling buyers called *farias* in Bengal, Bihar and Orissa, and Assam. Little is taken to the markets or *hats* by the cultivators themselves. This is a direct result of poor communications in those areas, especially in Eastern Bengal and Assam, which grow 95 per cent of the total jute crop of India. Those parts are traversed by many big and small rivers and mountain streams, which render communications very difficult, particularly during the four months of rainy season. Then the rivers get flooded and cut the villages off from the rest of the country. The only means of transport at that time is by boats, but navigation is rendered dangerous on account of torrents and floods. This provides a further check to the cultivators' abilities, as well as a desire to take their jute to markets.

The main factors responsible for the high proportion of sales in villages are as follows. The first most important reason is the smallness of marketable surplus. Individual holdings are fragmented, and Indian cultivation is essentially a small-scale one. There is practically no capital at the disposal of an average peasant. It is estimated that roughly Rs. 30 per acre is considered sufficient capital for farming in the Punjab, whereas £15 is required in Britain.¹ Naturally small efforts end in small results. Obviously, it is not worth while to take small quantities of produce to distant markets. Sometimes the total supply of the farmer might not provide a full load for the cart. In such a case it would be a waste

¹ *The Punjab of To-day*, by Trevaskis, vol. i, p. 323.

to take the cart to the market only half or partly loaded. Secondly, the majority of the produce is of a quality none too good, if not actually poor. Improved seed is used by a section of the population only, and the yield of the local seed is usually of an inferior quality. The quantity of marketable crops being small and their quality poor, the sales are mostly confined to the villages or small markets. Money crops, as hinted above, are exceptions. Crops like cotton, sugar-cane, jute, tobacco, opium, and oil-seeds are mainly grown for the market. The intention of the peasants producing them is, all along, to obtain a good price; hence, they are prepared to take greater pains in marketing those crops, but the circumstances are often against them. Transportation difficulties form the third impediment in the marketing process. The interior is still very much cut off from the urban areas, business centres, and the big markets. Therefore, transport from the former to the latter is difficult and expensive and takes up a long time. Fourthly, the cultivator, not knowing the procedure of the wholesale *mandis*, finds himself completely lost even if he ventures sometimes to take his produce there. He has to place himself in the hands of a dealer who is familiar with the conditions. But the peasant is suspicious of the commission agents in the markets, and cases have been brought to light where he has actually been cheated by them. Complaints have also been made that these agents, though acting for the sellers, have often been partial to the buyers, who have dealings in the markets more frequently than the peasants, and who, therefore, are on better and more permanent terms with the agents.

Further, the diversity of weights gives rise to the possibility of short weighments. Then, during the course of transactions, the broker and the agents, representing the buyer and the seller respectively, negotiate terms in a secret code. This again creates distrust in the minds of the sellers. It also happens that after the carts have been brought to the market and the produce unloaded, a poor price is offered. Or, in certain instances, having bought the whole cart of produce on the basis of a sample, and when the cart has been unloaded and the produce spread on all

sides, the buyer refuses to pay the agreed price on the plea that the stuff inside the cart is not as good as that on the top or on the exposed sides. He claims the lowering of the price already fixed. The only alternatives in such situations are either to reload the cart and take the produce back home, or to dispose of it by accepting the reduced price. In each case it results in loss for the seller. If he chooses the first course, it would mean that the time spent in bringing the produce to, and in taking it back from, the market would have been wasted. Probably the time could be ill-spared just then, thus causing a greater hardship. The cart and the bullocks would have been employed for no good, and if they have been hired for the purpose it would involve useless expenditure. Then the payments made in cash or kind to coolies who load or unload the carts, and other sundry expenses, should also be taken into consideration. On the other hand, if the seller wants to avoid all this, he must accept whatever price is offered, thereby making a smaller profit or even suffering a net loss.

Lastly, in every wholesale mandi, dues or charges of one sort or the other are levied on the sellers, making the marketing expenses still greater, and diminishing accordingly the desire of the peasants to sell in these markets. These are, briefly, the various factors normally responsible for the disposal by the cultivators of a large part of their produce in the villages. It has already been pointed out that the organized markets are administered by the associations of merchants, the buyers, in whom the growers have no confidence. The latter do not expect impartial treatment; and whenever any case arises where one of them has been unfairly treated, they put it down to their having neither a voice in the framing of the regulations nor any representation on the governing body. They go to the markets in the face of tremendous odds, and to return with the sense of injustice uppermost in their mind would mean that in future they would try to keep away.

Over and above the small consumers present in the village markets, a few dealers also are usually found there. The village *bantias* and some *banjaras*, *beoparis*, *paikars* (in the lac trade of Bihar and Orissa) or *farias* (in the jute trade) attend such markets.

They are essentially petty dealers working on their own capital, but a few of the *beoparis*, *paikars*, and *farias* may be in the employ of bigger merchants, or they may be working on commission basis. Sometimes the *taulas* (weighmen) and the *kumhars* (potters) living in different villages take samples of the produce to dealers in towns and obtain orders on various terms. Then they return to the villages, collect the produce from the cultivators, cart it, deliver it to the buyer, and distribute the price among the sellers. They may get their commission from the sellers or the buyers, or from both. Intermediaries of one itinerant class or the other are found operating in all parts of Northern India, and they prove of great help to the local cultivators. Without them the *banias* would be the sole buyers in the villages, excepting, of course, the consumers, who generally buy in small quantities for home needs only. Although these dealers do not possess any capital, that fact does not deter them from undertaking such business. By working for outside merchants, they provide new buyers, stimulate the demand, and create competition in the otherwise slack and uneventful village market. They are instrumental in the widening of the markets. *Banias* are functioning in all the villages of any consequence throughout Northern India. They generally deal in their individual capacity, and the poorer ones among them confine their activities to their shops; but the ambitious go out to other markets buying and selling, and often take the produce to big *mandis* as well. They work on their own capital, and either sell to the big dealers for cash or act as their agents on commission basis. *Banjaras* are a nomadic tribe, found in the western parts of the United Provinces and in the Delhi Province: they deal on a very small scale, buying in villages and selling in *mandis* or towns. *Beoparis* operate in all parts of India: they are middlemen, and trade on their own as small merchants or act as agents of the *arhtias*. *Farias* are common in Bengal, buying the local jute in small quantities, either on their personal account or on behalf of some *beopari* or big firm. *Paikars* are similar agents, ordinarily employing their own capital and mostly occupied with collecting lac in the province of Bihar and Orissa. The functions of these

small dealers, under whatever nomenclature they might be trading, are essentially the same. It does not make any real difference whether they carry on their activities on their own and sell the commodities to the merchants in the markets and towns, or serve big dealers in a regular manner, or are engaged as agents on commission and buy on behalf of their principals, and deliver the produce to them. They belong to the peripatetic class, and their main job is to collect the agricultural produce from villages and village markets and to carry it to the wholesale *mandis* and towns. It is in this manner and through these agencies that the surplus produce of the countryside reaches ultimately those points from where it starts on the reverse journey—from the wholesalers to the consumers.

The small dealers go from village to village, and sometimes even from door to door, making separate purchases. They also attend the village markets held at different places, at varying distances and in all weathers. Some amount of physical exertion and mental strain is involved in business activities of this kind. The villager is saved much expense and worry about marketing, especially if the distance to the *mandi* is great. Circumstances, as seen above, hinder him in carrying his produce to the wholesale market. Even if he can overcome the obstacles, on account of his own ignorance, he cannot be sure of making an appreciable profit. The *beopari* who belongs to the place, sometimes being a prosperous cultivator himself, is capable of performing the service because he deals in larger quantities, has gained experience in the course of business and, having capital, can keep back the produce and place it on the market when it is opportune. Yet, in spite of his usefulness, or maybe because of that, he takes advantage of the cultivator. Being the only buyer on a comparatively large scale, he is prone to lower the prices purposely, leaving the producer helpless, as probably there is not any other offer. Very often, the middleman performs certain allied or subsidiary functions as well. For example, he may undertake the cleaning and subsequent grading of the produce. If he intends holding it for some time, he will provide storage, and will, later on, transport it to the market. He invests

some capital to finance these activities. The risks assumed by him in the course of his business are quite formidable. He may not succeed in selling at a price that will compensate him for his enterprise; prices may fall instead of rising, or the produce may deteriorate, get damaged, or be lost during storage or transit. Thus the middlemen perform certain functions which, although not included at present by the agriculturists in their operations, are inseparably bound up with the proper sale and distribution of the agricultural commodities.

The *beopari* is the first real intermediary between the growers and the bigger merchants, as the others, although they also do similar business, are not to be universally found and are of quite local importance. He usually sells in a wholesale *mandi* and, having permanent dealings with him, goes straight to the *arhtia* (commission agent) on reaching the market. In other cases, on entering the markets, and even a mile or so ahead, the cultivators and dealers from the countryside are met by the servants or canvassers of the different commission agents. Persuasion having proved successful, the employees take charge of the carts and lead the prospective sellers to their principals' shops, where the *arhtias* are always in touch with the buyers. Then the negotiations for the sale of the produce commence. Between the village transactions at the bottom and the organized wholesale markets at the top of the pyramid, small markets are to be found in nearly all the towns and cities also. The produce brought there is generally sold to the local *bantias* or to other buyers through them. In most of the cases the sellers have long-standing business relations with the middlemen and make direct for their shops. The urban markets stand midway between the organized and unorganized markets. They do provide wider scope than those in the villages, but, on the whole, the individual is likely to be a loser by selling there. Practically all the produce marketed in the town *mandis*, with the exception of that consumed locally, finds its way sooner or later to the bigger *mandis*. Thus, double marketing expenses are incurred, and naturally the peasants get lower prices still as both the amounts are usually debited to their account.

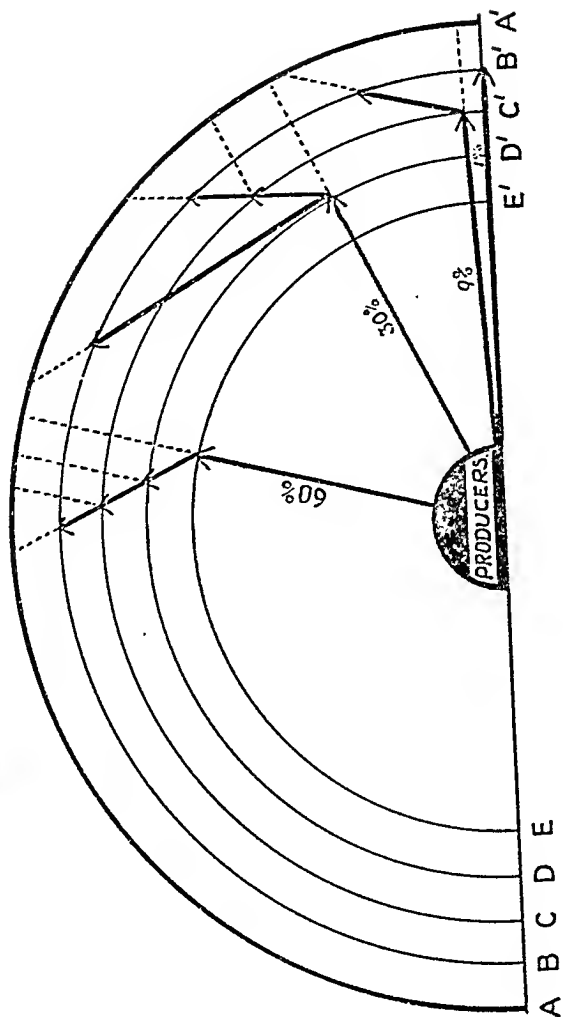
In the organized *mandis*, the *arhtias* are the most important class. They represent the actual buyers and sellers. As the *beopari* is a necessary link between the village and the small *mandi*, similarly the *kachcha arhtia* is essential for bringing together the *beoparis* and other sellers, and the *pucca arhtias* and other purchasers. The *kachcha* (or ordinary) *arhtia* does not often buy the *beopari's* goods himself. He is primarily a commission agent and acts for all sellers from the countryside, including the cultivators. The intending purchasers naturally keep in touch with these agents and intimate their requirements to them, often through *dalals* (brokers). *Dalals* are found in all the markets: sometimes one set acts for the sellers and the other for the buyers, but in the majority of the markets brokers operate in the interests of buyers only. It is not necessary to employ a broker, but the buyers generally do so to save themselves time and bother. His real business is to put the buyer and seller in touch. He acts in the name of the buyer and not in his own, and as he does not handle the produce himself, nor has actual possession of the same, he is not responsible for payment. He differs from the *arhtias* in the sense that he has no fixed business of his own, performs his functions by going about from shop to shop in the market, writes all the transactions arranged through him on a notebook, gets them confirmed by the *arhtias* later in the day, and works on behalf of the latter when they stand in need of his services. Still, he is not indispensable.

The *beopari* or the seller entrusts his goods to an *arhtia*, who in turn settles terms with another *arhtia* or *dalal* dealing on behalf of a purchaser. Both the *arhtias* put their hands under a piece of cloth, towel, or handkerchief, and start catching one another's fingers under the same. The bargaining is usually in terms of annas, as there is generally no dispute about the rupee part of the price. The negotiations go on in this secret manner till they are called off owing to failure in arriving at an agreement, or a price is settled, and then the seller is informed of the price agreed upon. In this way do the transactions take place in most of the *mandis*; whilst in some, an open auction is held at a fixed hour in the

morning, when the day's supply is expected to have arrived. Taking the prices ruling in other markets into consideration, as well as the estimated demand, the buyers bid for a certain quantity of the produce. After the final price for the day has thus been announced, individual dealings start. Normally, such price is accepted by all the sellers unless they regard it very low, in which contingency bargaining is resorted to. The *arhtia* pays cash to the seller as soon as the deal is effected, except when a running account is kept between the two. On the other hand, he does not ordinarily receive the purchase price from the buyer at once. The period after which the same is to be paid differs from market to market and depends upon mutual arrangements. In practice, not much risk is involved in this as the buyers are, invariably, wholesale merchants of long standing and good financial position, or they are the local representatives or agents of the big firms established in the urban areas. Through the *arhtias* the produce is passed on to the retailers for home consumption, to the mills for manufacturing purposes, to the exporters for external trade, and—either by way of a direct sale or to be sold on their account on a commission basis—to other members of their profession who rail it to different places.

The wholesale dealer is called *pucca arhtia*, to distinguish him from *kachcha arhtia*, the commission agent. The former does not deal directly with the sellers, but buys through the latter, and is often the agent or representative of firms of buyers and exporters in towns, cities, and ports. He does business, i.e. buys in the market on his own behalf also. In the mornings, he or his *dalal* goes to the *arhtias'* shops, inspecting goods. Offers are made either then and there or after the auction is over. Some agents act for buyers and sellers both and are called *kachcha-pucca arhtias*. If the *pucca arhtia* is trading on his own, his position is clear. Having bought the produce, he sells it to the different dealers in other parts of the country, who either supply the retail dealers and the manufacturing concerns or export it to foreign countries. But it is when he is acting for outside buyers that he becomes, for all practical purposes, another commission agent.

THE PROPORTION OF AGRICULTURAL PRODUCE MARKETED AT DIFFERENT STAGES.



A-A' represents Consumers. C-C' represents Town Markets.
 B-B' represents Wholesale Markets. D-D' represents Peripatetic Dealers.
 E-E' represents Village Markets.

The thick line represents direct connections between different marketing points (indicated by arrow-heads). The dotted line represents direct connections between marketing points and the consumers.

Some leading firms of exporters—e.g. Ralli Bros., Volkart Bros., and the Japanese Companies—maintain their own branch offices in the principal markets. A few big Indian manufacturers, particularly of textile goods, also keep their employees at such centres to buy direct for them. But the majority of the businesses, situated away from the growing areas, find it convenient and profitable to engage the *pucca arhtias*. The head offices merely furnish the details regarding quantity, quality, price, time and place of delivery, mode of despatch, etc., to these agents, and do not concern themselves with their purchases any more. On occasions they send over some of their own men, but these representatives also approach the *pucca arhtias* and arrange the deals through them. The help of the latter, through their knowledge of the different types of produce marketed and of the local men and conditions, proves invaluable to the city dealers who, further, do not have to worry over the payments for individual purchases. The buyers maintain accounts with the *pucca arhtias*, who finance the purchases from time to time, pending the transmission of funds from the headquarters.

The different stages through which the agricultural produce has to pass in order to reach the consumer, or the processor with whom the industrial activities begin, will be clearly understood from the accompanying diagram. The grower may sell his produce direct to buyers in the rural areas, or may take it to the mills or wholesale and town markets. The three latter methods of sale together do not involve more than 10 per cent of the marketable surplus. Mills and factories are very seldom supplied by the agriculturists except in the case of cotton and cane, which are usually marketed straight from the field. Thus, the town and wholesale markets do not directly receive from the producers a great portion of the saleable amounts. In all about 90 per cent passes from the growers to the middlemen—either through the peripatetic dealers who collect from house to house, or direct in the village market—and then it reaches the consumer through the local *bania*, *beopari*, *arhtia*, and retailer, manufacturer, or exporter.

CHAPTER V

WEAKNESSES OF THE SYSTEM

THE agriculturists in India are still, comparatively speaking, ignorant of division of labour, especially in the marketing field. We have seen in the last chapter that agriculture is diversified, that is, an average peasant grows a number of commodities in the course of the year. This feature is a strong point in our agriculture; but the tendency towards multiplicity is carried too far, and is to be particularly noticed in the case of processing preliminary to sale. Each of the producers and the traders performs a part of various marketing functions. Thus, the producer not only grows the crop, but he may also store the produce, weigh it, transport it, finance it, and assume the risks involved in disposing of it. In spite of his taking a hand in these functions, or probably because he cannot perform them satisfactorily, the middlemen or their wholesalers also concern themselves with the same jobs once again. Even the retailers, in most of the cases, have to pass the commodities through the same processes. The fact remains that all of the services are undertaken by each one separately.

The duplication and multiplication of the marketing functions is responsible for large wastes; and all this is due to the fact that, at the source, there is no clear-cut division between the actual agricultural operations and those preparing the produce for the market. But the cultivator can hardly be blamed for the state of things. He is in every way ill-equipped for the discharge of his duties. He lacks education, training, and capital, with the result that none of the processes is efficiently carried out. He tries to do the whole work single-handed, or rather with the help of his family only, and fails. Because he has no funds, he cannot buy good and improved implements and cannot engage labour. The produce, therefore, is not well threshed, nor quickly gathered. His storing capacity, again, is limited owing to his poverty. Most of the small peasants who form the majority of the agriculturists

in Northern India—except the settlers in the Punjab Canal Colonies—do not have any specific or separate place for storage. They just pile up the grain under their roofs: the quality naturally deteriorates when it is exposed like that. Partly on account of the absence of storage and partly due to the various pressing demands for money, the peasant is compelled to sell his crop sooner than he would otherwise have done. If he wants to cart it to a market, he finds himself confronted with weak bullocks and maybe a broken cart—sometimes he does not own either and has to hire them. Then the poor communications act as a brake on his desire to reach a good market. These different factors combine to form a vicious ring, preventing him from performing the functions well.

Marketing, it has been pointed out before, should be regarded as a part of production, and the processes involved therein should not be ignored by the producers. But it should not be concluded that every agriculturist should try to raise crops and also to perform all the functions himself. If specialization is desirable in production, it is quite as necessary in the preparation of the commodities for the market, and specialization cannot be introduced without adopting division of labour. If, therefore, the marketing services are entrusted to some agency under the direct control of the farmers, or if they are undertaken by a group of farmers exclusively devoted to that work, specialization and efficiency can be achieved, and the interests of the farmers safeguarded. The absence of division of labour during the marketing stages is, to a great extent, responsible for the inferior quality, on the whole, of the Indian produce, and for the present poor reputation in important markets, either home or foreign. The main defects in the Indian system of marketing may be examined now.

(1) STANDARDIZATION.—While preparing produce for the market it is desirable and important that the different lots offered for sale be uniform, or adhere to some common characteristics fixed from the point of view of demand. This will enable sales by description, and will necessitate the setting up of standards,

the grading of products to conform to those standards, and the subsequent carrying out of inspections. The two terms, "standards" and "grades," have a somewhat similar but not identical meaning. Both are almost entirely qualitative functions, but the first has a broader significance than the second. Standardized products are sold by grades, which means that first certain standards are established on the basis of purity, quality and condition, and then grades are made according to quality size, quantity, variety, colour, flavour, method of packing or other attributes of the commodity. Standardization is first a production problem, and then a distributing one. In India, the improved strains—Pusa wheat, Coimbatore cane or Broach cotton—and the produce therefrom, or the extent of barley and dirt (admixture) in wheat, for example, may give rise to certain standards. But the whole produce from a particular type of seed will not be exactly the same in size, quality, and market value. Or some goods may be very pure, i.e. without any admixture or with much less admixture than that provided in the standards. So that within the existing standards, some grades also may be adopted to emphasize the uniform character of the merchandise. It is in this sense that standards are the forerunners of grades, that the two terms will be hereafter used in the present enquiry. The study of the ways in which the marketing functions are performed in Northern India may be continued now.

A great weakness in the Indian agricultural products lies in the fact that they are of a mixed quality. This is primarily due to the inferior seed used for sowing. Generally, the cultivator keeps a portion of his crop for that purpose. The produce itself being the result of poor and mixed seed, that part which is intended for the next sowing will naturally yield as bad a harvest, if not worse. In the course of the year the seed reserve tends to deteriorate, and in many cases it is consumed by the hard-pressed family, or is sold to provide a little fund. In these circumstances the peasant buys or borrows seed for the next crop; and, as such deals are always of a local character, there is no possibility of an improvement in quality. In this way the evil of bad seed is perpetuated

or even aggravated. The various Agriculture Departments are trying to popularize new and superior grains, but their efforts have so far been organized on small scale, and great benefit has not resulted so far. The following figures give an idea of the area under new and improved varieties in British India. The much higher percentages of four principal crops, however, do not reflect the real good done to the growers. The improved seed will always give encouraging results when experimented upon under

*Areas under Improved Crops in British India in 1930-31**

(1) Crops	(2) Total Area (acres)	(3) Under improved Crops (acres)	(4) Percentage (3) of (2)
1. Rice	80,632,000	1,247,717	1.6
2. Cotton	14,201,000	3,199,176	22.5
3. Wheat	24,797,000	5,025,889	20.2
4. Jute	3,402,000	1,104,997	32.4
5. Sugar-cane	2,869,000	1,058,043	36.9
6. Ground-nuts	5,310,000	144,877	2.7
Total area under all crops	261,913,000	12,533,410	4.8

* Sources: *Agricultural Statistics of India, 1930-31*, vol. i; *Review of Agricultural Operations in India, 1929-30, 1930-31*.

satisfactory conditions on the farms; but used by the average ryot and starved of sufficient and right manure, and not getting specialized and expert treatment, those very strains are bound to yield much inferior produce. And, gradually, even the best seed would deteriorate if it is continuously used without the infusion of new types. This is what is actually happening in India: the farmers sowing improved seed do not change it periodically, with the effect that after a few years the quality again goes down.

Moreover, the cultivator is not likely to take much trouble to adopt improved varieties if he finds that he cannot get a better price for the superior produce. As unadulterated and pure or very high standards are not quoted in the markets, there is no incentive for him to improve his produce. Here we find him in a dilemma.

He cannot or does not grow an improved quality because of the absence of a demand for it; and there is no demand because the supply is non-existent, or at least not assured and regular. To a certain degree the middleman is responsible for this lack of improvement in quality, as he normally buys in bulk and cares little for the quality. The consumer, too, pays scanty attention to the quality, and tries to buy a better class product at the rate of the ordinary one. Unless there is an all-round improvement over a fairly large area, there seems to be no way by which the peasants can obtain a due premium for their efforts. While studying the local marketing conditions at Lyallpur, in the Punjab, the present writer was informed by some big dealers that, during the post-War period when wheat was being exported from India to Europe, an effort was made by them, by sending a few very clean and uniform consignments, to improve the standard of the exported wheat. Not only did they not get any premium for that quality, but they were even told by the exporting agencies at Karachi that there was no foreign demand for the superior grain, and that before exporting it they had to reduce the particular wheat to the then existing low standard in order to fulfil the requirements of the trade. The exporting concerns could not be blamed for the lack of appreciation of better quality. Indian wheat had a reputation for a certain amount of admixture of barley and dirt, and orders were being received according to that standard. Evidently no other class could be supplied in place of the one contracted for.

But a new and a superior standard can be established in place of the inferior one, if the general level of the produce is raised and if an assured supply of the same is forthcoming regularly. This can be brought about only through a more or less universal adoption of improved varieties by the wheat growers, for example, of the Punjab and the United Provinces. The isolated efforts of a few individuals—either agriculturists or dealers—are doomed to failure. Moreover, in the Indian markets there is usually no sale by specification—it is mostly by samples. And, even if there are standards for export purposes, they exist only in name. The quality varies constantly, and the importers in other countries

complain of adulteration. A standard indicates quality and carries the idea of uniformity. Goods should be of a certain quality irrespective of the place where, the time when, and the people by whom they are produced. The element of permanence in quality is essential in standards. But this does not mean that they should be rigidly fixed for all time to come: as the quality keeps on improving, the standards also should be revised.

(2) GRADING.—This brings the discussion to another weak spot in the marketing methods—absence of grades and adulteration of produce. In India, the methods of picking the grain and separating it from the chaff, or whatever be the processes of gathering and cleaning the harvest, are very primitive indeed. They are done by hand, and when animal power is employed it adds to the uncleanness of the produce. Later, it will be shown how the various commodities are stored and transported, and it will be seen that instead of the condition improving and the produce becoming purer at each successive stage, there is a distinct tendency in the other direction. Sorting is seldom performed. If some part is absolutely unfit or rotten, it may be removed, but the rest is allowed to remain together. Therefore, the produce sold in the markets is more often than not of a mixed type, consisting of good, bad, and indifferent—all sorts. One of the distinguishing, and at the same time handicapping, characteristics of agricultural, as opposed to manufacturing, industry is that the produce cannot be accurately controlled, either in quality or quantity. Hence, even a normal crop is expected to be of a mixed nature. Big and small grains as well as healthy and half-matured ones, in a word, superior and inferior qualities both, make up a harvest. If a rational view is taken of the marketing processes, the total quantity should be sorted out and placed in different classes according to the common features. By fixing such grades, distinct attributes would be attached to each, which would help the sales and purchases of the particular commodity. Goods should be graded in accordance with the specifications set up in the standards. Grading at times involves inspection to ascertain the qualities of the product. It facilitates the sales, and the buyer's task is also

considerably reduced as the element of risk present in each purchase on his part is very much lessened: other marketing functions as well, e.g. transportation and storage, are rendered easier and cheaper. This is reflected in the invariable improvement in prices. The increased prices would generally—according to experience elsewhere—more than compensate the sellers for the extra expenditure incurred. As compared with the cost of its performance, probably, no other marketing function enhances the value of commodities so much. On the whole, grading according to definite standards decreases the total marketing costs, and means higher prices to the producers and often lower prices to the consumers.

In the case of agricultural produce serving as the raw material for manufacturing industries, grading becomes an essential condition precedent to sale. With the growth of industrialization and competition, the machinery is becoming more and more specialized and sensitive, necessitating the adoption of very regular and uniform grades for the supplies of primary products. For fibres, for example, the length of the staple is a guiding factor at the time of buying. Whether the cotton has a long or a short staple, it should be graded uniformly, otherwise spinning would be rendered impossible. If the sellers of cotton do not grade it, the spinners must do it, and that reduces the price appreciably to the seller. Apart from the absence of definite and permanent grades, Indian produce is further handicapped on account of the dishonest practices adopted, both by the producers and the dealers, in the course of handling it. The prevalence of adulteration, thereby spoiling the quality, is a matter of common knowledge. Complaints about the malpractices concerning Indian exports were made by different witnesses before the Agriculture Commission.¹ It was pointed out that the wheat exported from Bombay was sometimes damaged and contained dirt, and that the quality had steadily deteriorated. The quality of jute was said to have been worsening from year to year. There was a general complaint that wheat, cotton, and groundnuts contained too much

¹ Vide Evidence (Marketing Section), vol. x.

moisture—the result of deliberate dampening. The representatives of the importing firms in England, further, said that sometimes pieces of wood and metal and other foreign matter were found in the produce, and that the presence of such articles constituted a great danger to their machinery. The net effect of adulteration or carelessness is about the same, and can only recoil on the heads of Indians—producers, middlemen, and exporters alike. Not only are poor prices offered for inferior produce—non-standardized and ungraded—but through malpractices a bad reputation is created among the buyers, and it leads to the gradual stoppage of foreign orders. This should be particularly borne in mind as the competition of the New World countries is much greater now than ever before.

(3) STORAGE.—It has already been mentioned that, owing to pecuniary difficulties, the Indian peasant is forced to sell his produce within a month or so of harvesting the crops. To them might be added another cause—insufficient and poor storage. His means do not allow him to build any fair-sized house, and the living-space usually serves storage purposes as well. Even if we ignore his traditional poverty, the volume of produce is so liable to fluctuations, due to climatic and other causes beyond his control, that he cannot be sure how much room should be provided for storing it. The fact remains that he is very poorly equipped for holding the produce for any long period of time, and does not make any arrangements for long-term storage. While he has the produce in his house, he is watching prices and trying to sell, if possible, outside the village market. In the meantime the produce is heaped up in some covered part of the house. There it remains exposed to the ravages of rats and insects, and, quite commonly, the wind blows dust over it, and sometimes even the rain gets at it in these mud houses, and under the thatched roofs.

At most, the ryot stores only a few maunds of grain for home consumption and seed purposes. He may have to part even with this before the year is out; but in any case he does propose to store about 5 to 20 maunds, and hence prepares storage for that.

It should be made clear here that whatever permanent storing is done by the growers is for the household and private use only: they do not store crops for a rise in prices. Of all their produce, they consume grain most; therefore it is grain that is stored most by them. In the Punjab and the north-western United Provinces—the great wheat-growing regions of India—wheat is generally eaten, so a part of the annual crop is stored for family needs. In the central and the eastern United Provinces and in the western Bihar wheat, millets, and rice form the staples of food, so these are stored there for future consumption. In east Bihar, Orissa, and Bengal rice is stored, being the main article of food. The particular foodstuff differs from one area to another, but the peasants do try to save some and store it for the future. Small quantities of jute and oil-seeds are also held back for home requirements. When they need oil, they take their own seeds to the village *teli* (oil-man) and get them pressed on a small payment in cash or kind. The same practice, however, does not prevail in the case of cotton and sugar-cane: a little cotton may be put away for the purpose of padding the clothing during the cold weather, but it does not amount to much and is not universally done. And as cane is rather bulky—and presses, being expensive, are not commonly owned—it is seldom stored. It is more convenient for the growers to buy small quantities of cotton, *gurr*, and raw sugar (white sugar is beyond their means) when needed than to store the raw commodities. Thus practically the whole supply of cotton and cane, about 99 per cent of jute, and 95 per cent of oil-seeds find their way ultimately to the market. This condition of affairs is more or less universal in Northern India. So the cultivator is concerned with the problem of storing only a comparatively insignificant quantity out of the total produce of commercial crops. The means of storage he employs are very primitive. Earthen pots and vessels serve his purpose, if the amount to be stored does not exceed about 2 maunds. Where larger quantities are to be stored, big mud vessels, about 8 to 10 feet high and 4 to 6 feet in diameter, are constructed. And if the grain is more than, say, 50 maunds, barns (*kothas*) are specially constructed.

Storage in gunny bags, mostly for temporary purposes, is also quite usual for relatively large quantities.

In the *mandis* also the form of storage is very much alike throughout Northern India. It still remains primitive, though not so crude as that obtaining in the villages. The most common, if not the universal, mode of storing is in *kothas*. They are to be found all over the Punjab, the United Provinces, and Bihar—being called *golas* in the last province—and the owners are known as *kothadars* and *goladars* respectively. These barns are generally masonry structures made with bricks and lime; they are big rectangular, or sometimes circular, chambers having varying capacity of anything between 600 and 1,200 maunds. They each have two or four doors level with the floors, which are usually tiled with bricks, and are even cemented in some of the new *kothas*. The doors are opened when required, and the grain thrown in or taken out, as the occasion may demand: there it remains stored in bulk. Smaller *kothas* also exist, where gunny bags full of grain are kept piled one over the other. The form of storage differs in certain areas, and depends on the soil and the water-level. In Hapur, the biggest wheat *mandi* in the United Provinces, *khattis* (godowns) are commonly in use. There were about two thousand of such godowns in that place alone, but on account of poor business 1,300 to 1,400 only were filled in 1933. When the prices are high there is a great demand for them, as many persons want to store grain and hold it for the future. Formerly the average capacity of a *khatti* used to be about 700 maunds—between 600 and 800 maunds—but, owing to lack of demand for big ones, about 50 *khattis* of 300 maunds each have recently (i.e. since 1931–32) been built. Another indication of depression was the fall in rents for godowns. During the post-War period they rose to Rs. 100, and even Rs. 200 per year; but at the time of these investigations in 1933 they had dropped as low as Rs. 5, and only two-thirds were full. They are deep earthen pits of the shape of wells, narrow for some distance from the opening at the top, and broader at the bottom, with the inner walls smoothened, plastered, and lined with straw or chaff. They are filled by throwing in the

grain, but the removal of the same is rather laborious as the *khatti* goes deep down into the surface of the earth, and has only one opening, a round one, at the top—about 3 to 4 feet in diameter—which is normally kept plastered up and sealed. Therefore a man is lowered into the pit, where he fills up basket after basket, which are drawn up, emptied outside, and then lowered again; in the end, the man is pulled up, and the mouth of the pit closed.

In Hapur the soil is hard and dry, hence the *khatti* also remains dry and fit for the storage of grain. Similarly, at Ghaziabad the *khatti* is generally preferred, there being only a few *kothas* in the town. On the other hand, in the same district, at places like Meerut, the level of water is higher and soil sandy, so a *khatti* would get wet and become unsuitable for storage. *Kothas* and *khattis* each have certain other advantages and disadvantages. As they are grouped together in compounds where watchmen live, *khattis* are better protected against pilferage; and, being dug into the heart of the earth, they are more immune from damage by rats and insects. The difficulty, however, is that they cannot be built in every soil, but only in a hard and dry soil. While a *kotha* usually has a larger capacity—on an average 1,000 maunds—its cost of construction is much more than that of a *khatti* of the same size, being about Rs. 50, as compared with Rs. 20 for a *khatti*. Nevertheless one has to bear in mind that the atmosphere inside a *khatti* becomes surcharged with odours and gases; consequently it must have injurious effects on the health of the men who go down to send the grain up. Moreover, the pouring in and the pouring out of grain raises clouds of dust which is suffocating for the workers handling it. Thus the whole system is unhygienic. Further, it cannot be claimed that either of these types of storing places is moisture- and rain-proof. The grain does sometimes get damp through water from above due to rain, or from below due to percolation. Costly construction, in the form of iron-sheet lining for the chambers, is not within the means of the ordinary owner.

The *kothas* and *khattis* are generally owned in small numbers

by the local dealers, banks, and private individuals, who let them on hire for the season. The barns and godowns, situated in the markets and the consuming areas—towns and cities—are concentrated around a few centres, although it is not possible to say if they are sufficient; and their quality and building technique needs improvement. None are, however, to be found in the rural areas, the growing regions. The inevitable result is that storage facilities are available for the dealers and lacking for the producers. Or it might be said that the dealers have created the necessary means for the holding of agricultural produce for better prices, and that the producers have not been able to make similar arrangements for themselves. It is desirable that the agriculturists also should be adequately equipped for the keeping back of their produce till they regard the prices as favourable for sale; they should not be obliged to sell owing to the absence of storehouses.

(4) WEIGHTS AND MEASURES.—There is a bewildering variety in the weights and measures used in India. Owing to the peculiarities of the trades, diverse standards are current in particular localities. Not only do these vary from province to province, but they also vary within the same province and between different commodities: in a word, although the unit of weight is everywhere called the maund, it represents in actual practice varying quantities. Even in one locality and in one trade, standard weights issued by the Mint are not used by all, and in the countryside they are seldom to be seen. The weights possessed by the banias and other village dealers are sometimes made of stone of all shapes and sizes, and are only remotely connected with the standard weights. The unscrupulous traders keep two sets of such weights: the over-weight to be used when buying, and the under-weight when selling. They go about with their own weights and see to it that they do not lose in the weighing process. Though one may not attach any fraudulent motives to the merchants, it cannot be denied that there is a general inaccuracy in the weights. How far naccuracy and fraud go together is difficult to say, but it is far from uncommon. Both the standard weights made of iron and the indigenous ones made of stone—the latter in a greater degree—

when handed down from father to son, and used for scores of years, are bound to be worn and become inaccurate. Every organized market has its own weighmen (*taulas*), who are entrusted with the weighing of all the produce sold there. They are paid by the sellers and are expected to be impartial in discharging their duties; but complaints are constantly made by the cultivators, taking their produce to the markets, that the *taulas* do not act fairly while weighing. The buyers, being the *arhtias* and other big dealers, frequent the markets much more than the sellers, and manage to win over the weighmen, who thus sacrifice the interests of the sellers and weigh out more to the buyers. Even when the cultivator takes his produce to the mill or to the godown of a merchant, outside the market compound, and weighing takes place there, the scales, whether beam or platform, are often manipulated in favour of the buyer and against the seller.

The local authorities possess powers—and most of them have framed by-laws as well—to inspect the weights and measures, but the rules are seldom observed. At every stage, from the Government of India to the provinces, and from the latter to the villages, the process of development has not been in the natural manner of a federation of smaller units into a larger one; but the illogical method of devolution of powers from the larger unit to the smaller ones has been followed. It has been exactly the reverse of the evolution in Europe, and has resulted in unsatisfactory and slow progress; this is applicable to both the fields of local self-government—urban and rural. In the former sphere, corporations were started first in the three Presidency towns, to be followed by municipal boards in larger and later in the rest of the cities. These bodies proving inadequate for smaller towns and headquarters of *tahsils* and subdivisions, town and notified area committees were created to perform the municipal functions there. The present position is that all the cities, i.e. the headquarters of the districts, have Municipal Boards, consisting almost entirely of elected members; but for small towns there is no uniform system. In the rural parts of the country, District Boards with jurisdiction

over whole revenue districts were originally set up.¹ They proved, in the course of time, incapable of benefiting the interior of the country, and were supplemented with local and *taluk* boards for portions of districts. A District Board is now established for each district, and consists almost wholly of elected members, but among the smaller areas there is no uniformity. The local, *Taluk*, or Circle Board functions in all the provinces except the Punjab and the United Provinces, has jurisdiction over part of a district, and is nearly everywhere a subordinate agency of the District Board. Even these were found too large to be of use to the villages, and since the Montague-Chelmsford Reforms attempts have been made to revise the ancient *Panchayats*. In one of their most important recommendations the Royal Commission on Decentralization in India had, as early as 1909, strongly urged that step, but for about a decade no effect was given to it. The village *Panchayat* or Union Board has jurisdiction over a village or group of villages, and is to be found in all the provinces, though in varying, and in some parts very small, numbers, as it has not proved possible to progress very rapidly: hence it has, so far, been of little actual help to the rural areas. The functions entrusted to Municipal Councils comprise the administration of education, public works (including streets, roads, buildings, and bridges), and public health (including medical relief and sanitation). The District Boards perform much the same work, allowing for the different conditions of town and country. The *Panchayats*, on the other hand, are primarily concerned with the sanitation, and, somewhere, also take care of minor roads and manage the elementary schools.

This digression over local self-government was considered necessary in order to give an idea of the difficulties and the prob-

¹ "The size of the average district, which is normally the unit for rural self-government, is in Madras about 6,000 square miles, in Bombay about 5,000, in the United Provinces about 2,500, and in Bengal about 2,700 square miles. Compared with the average area of an English administrative county, which is about 970 square miles, these are units so unwieldy as to add greatly to the difficulties of administration, while the average population of a district is also far higher than that of an English county."—*Report of the Indian Statutory Commission*, 1930, vol. i, p. 311.

lems involved therein. The organized markets, generally situated in fairly large towns with separate Municipal Boards, come under their control; while the countryside and the local or village markets are within the jurisdiction of District Boards. And as communications also are managed by these bodies, they directly affect the marketing conditions of agricultural produce. In another place the sources of revenues of the local authorities will be examined; but it might be mentioned here that their finances all over the country are inadequate for the services which they have to perform. The cumulative effect of all these factors is that the work suffers, and hardly any of their duties is efficiently discharged. The same is true in the case of weights and measures. Who is there to check them and to test them under such circumstances? There are no officials and no staff to perform these functions. In this respect India is a century behind American and European countries. The provision for uniform measures ought to have been one of the first pieces of legislation. The adoption of standard measures should have been made obligatory at least fifty years ago. Elementary evils, when neglected for long, assume big proportions with the passing of time.

In 1913-14 the Indian Weights and Measures Committee recommended that standardization and uniformity should be enforced, but the Government of India did not take any steps to carry out the recommendation. It is to be regretted that no provision was made for the compulsory setting up of weighbridges even in the Regulated Markets in Berar. It is true that the weighmen there are controlled by the Market Committees; but the writer, while investigating the conditions of the marketing of cotton at Amraoti and Akola, found that the agriculturists were dissatisfied with the management as the committees had majorities of merchants who were prone to be partial to their own class rather than champion the cause of fair play and justice. He also learnt that the local dealers were opposed to the introduction of weighbridges on the plea that dirt and dust would get deposited in them very soon, and that it would upset their accuracy. Experience elsewhere had proved, however, that this fear was unfounded,

hence it was not a valid ground for opposing weighbridges, as was pointed out by disinterested persons at those places. And this was confirmed on a visit to Wardha in the Central Provinces, where weighbridges were working satisfactorily. On being questioned as to what would they do if the mechanism went wrong and the accuracy were affected, the owners said that there was seldom anything wrong with the bridges; and if something were to happen to them the mechanics of the agents for those machines would go down from Nagpur and remedy the defect free of charge. This shows that there is either an inborn and an unjustifiable prejudice against the installation of weighbridges, or the interested parties oppose it because they would no longer be able to manipulate the measures and the scales. Further, owing to the different systems prevailing in the country, it becomes difficult at present to interpret the local prices in terms of standard weights and measures. Variations between villages and markets jeopardize the interests of sellers, and hamper trade and commerce. Complication in weighing, the necessity of conversion from one scale to another, the fraud committed through inaccurate weights and manipulation in weighing, lead to the duping of the villagers.

The Agriculture Commission also criticized the existing conditions of weighing, and suggested that the provision of weighbridges in the regulated markets should be made compulsory; but the number of such markets is so small that it will not lead to any great improvement. The Commission realized that local trade custom and tradition were serious obstacles to all-India legislation, and recommended to the Government of India again to undertake an investigation of the subject. A fresh inquiry, however, could hardly reveal any new facts. The situation with reference to weights and measures does not change from time to time, and can, by no stretch of imagination, be a proper subject for periodical investigations. The Banking Enquiry Committees as well took cognizance of the present evil of weights and weighing; and the United Provinces Committee, supporting the findings of the Agriculture Commission, also suggested to their Government the institution of an enquiry. If these recommendations were to be accepted, they would

start a new series of Enquiry Committees—on the lines of the Banking Committees—both for the Centrally Administered Areas and for the Provinces. The whole idea of so many enquiries in order to legislate for weights and measures is preposterous. The fact is recognized that there is a general inaccuracy, and at the same time the Report of the Committee of 1913-14 is there. It is difficult to understand how and why the conclusions arrived at then have ceased to be of any value. Even if “local trade custom and tradition offer serious obstacles to all-India legislation,” it cannot be ignored that no part of India is isolated or cut off from the rest. Whenever any piece of legislation has to be passed, local difficulties and particular obstacles have to be faced, and with a little determination they can be overcome. Why the authorities should be fighting shy in this case is beyond comprehension. When there is inter-provincial commerce, uniformity in measures is a necessity, and the only way out of the *impasse* is through all-India legislation. The local opposition, if any, and the various difficulties, will have to be overcome. Instead of a regular enquiry, or a series of enquiries, being held, which is bound to be expensive and dilatory, some one person might be put in charge of the whole question. He should draw up a workable scheme and prepare a draft bill in consultation with the Provincial Governments, keeping before him for the sake of guidance the Report of the Weights and Measures Committee. One reform, in this connection, which can be effected without loss of time is the reduction in the prices of standard weights. According to the Punjab Banking Enquiry Committee, a complete set at the Mint costs Rs. 534-1-0, which is obviously prohibitive. In order to encourage the use of standard weights, it is desirable to lower their price considerably; and the authorities should find it possible to supply a set to each local body free of cost. The Berar and Bombay Markets Acts include provisions for the regulation and standardization of weights and measures, but financial stringency prevented the implementing of the legislation. The respective Governments should allot funds for this purpose, and inspecting staff should be engaged without further loss of time.

(5) MARKETING EXPENSES.—It has been shown in the last chapter that a very small section of the cultivators takes its produce to the bigger *mandis* for disposal. Those who do go there, as also the *beoparis*, find that they have to incur certain marketing expenses. These charges are arbitrarily fixed by the *arhtias* and levied upon the sellers in the *mandis*. The markets are managed by the local dealers, *kachcha arhtias* (commission agents) and *pucca arhtias* (wholesalers). The people from the countryside have no part in the management, and, therefore, have no say in the fixation of the market dues, which tend to be determined in an irresponsible spirit. Some of them are payments for the services rendered, or expected to be rendered, to the selling visitors, but they are not based on the benefit of service principle. They are imposed as if they were taxes. Such is the case in, what might be called, the organized *mandis*, while in smaller and less important ones they are not even uniform for all classes, and the *beoparis* have often to pay less than the actual growers. These impositions taken together act as a great deterrent on the latter's desire to market the produce themselves.

The exact charges differ from place to place, but their nature is the same everywhere. In order to sell in the markets, the services of *arhtias* are necessarily utilized and have to be paid for. It is not the practice for the outsiders to sell direct to purchasers in the markets, as the latter refuse to deal unless commission agents negotiate the transactions. Under these circumstances the agents become indispensable. The worst feature, however, is that the purchasers, because they are too busy, or regard it derogatory on their part to go about inspecting commodities and settling prices, engage *dalals* (brokers) to arrange deals for them, and these brokers, too, have to be paid, in part at least, by the sellers. From the point of view of the latter, *dalals* perform no useful function and need not be employed; or, if the buyers require their services, they should pay the brokerage in full and not pass on any portion of it to the sellers. Rule 59 made by the local government under the provisions of the Bombay Cotton Markets Act of 1927 is relevant here. It lays down that "No person

shall in the absence of express agreement be bound to employ a broker in any transaction, or be required to pay for a broker employed by any other party to the transaction, or to pay for a broker when none is employed." The Berar Act, known as the Berar Cotton and Grain Markets Law of 1897, includes a similar rule. If law to like effect is passed in Northern India as well it would put a stop to the existing practice; and, as it would be illegal for a buyer to make the other party pay for the employment of a broker, the seller would be rid of the charge and the danger of his being paid a proportionately lower price by the buyer would also disappear.

Below are given the standard market charges that the sellers have to pay in a few leading *mandis* in Northern India. The Hapur market may be taken up first. It is not possible to say in the case of that *mandi* whether the various dues are high or excessive. They are of an absolute importance and the relative value is not easy to assess; but the arbitrary nature of some of them, however, is apparent. It should be pointed out at this stage that the adulteration of goods is so common as to make it difficult to apportion the blame between the producers and middlemen. Nobody knows who started the game, but it might be near the truth to say that both are more or less equally responsible. The producers try to cheat the middlemen, their customers, and the latter in turn try to cheat the manufacturers, exporters, etc. When they bring their commodities to the markets, the growers—at least, some of them—place good stuff on the sides and on the top (i.e. in the exposed parts), and heap the inferior produce at the bottom and in the middle. Obviously, this variation in quality cannot be detected till the whole cart has been emptied, and then disputes over prices and deductions arise. Complaints against buyers are subsequently circulated by the sellers, irrespective of the part played by themselves. This does not imply that all the sellers act in this manner, nor that the buyers are always the victims. But this much must be admitted, that the buyers are in a better position to intimidate the sellers than the latter are to cheat the former.

Sellers' Expenses in the Hapur Mandi (District Meerut, United Provinces)

1. Commission (locally termed <i>tulai</i>)	Rs. 1-4-0 per cent on sale value
2. Deduction by the buyer (on account of brokerage and possible dust and mixture)	4 <i>Chataks</i> per maund
3. Buyer's <i>Palledar</i> (porter who fills and packs)	1 <i>Chatak</i> per maund
4. <i>Arhtia's Palledar</i>	1 <i>Chatak</i> per maund
5. <i>Arhtia's Taula</i> (weigh-man) ..	1 <i>Chatak</i> per maund
6. <i>Arhtia's</i> servants (waterman, sweeper, etc.)	1 <i>Chatak</i> per maund
7. <i>Gaoshala</i> (charity)	1 anna per cent on sale value
Total	Rs. 2-9-0 per cent on sale value

Thus the total expenses of a cultivator-seller in that *mandi* amount to Rs. 2-9-0 per cent on sale value; and in every forward delivery transaction of 25 tons each the *dalal* gets a brokerage of Rs. 1 (8 annas from the buyer and 8 annas from the seller). Now in this list it will be noticed that a number of items, referring to the buyers, are paid for by the sellers. This practice, like brokerage, is indefensible and should be abolished. Why should two payments be made for the same service, *palledari* for instance? Produce is weighed and filled only once in each transaction, so the seller should naturally pay for it once only. Secondly, a deduction is made by the buyer on account of the possibility of inferior quality. We have to bear in mind that the transactions take place after the actual inspection of the goods, and the prices are naturally settled on the basis of quality, taking into consideration the extent of adulteration. Hence, the deduction is made to safeguard the buyer against a contingency which may not arise. On the other hand, no credit is given to the seller, no premium allowed, and not even the deduction cancelled if the produce shows a uniformly good quality at the time of weighing. But if it is inferior the price must be reduced and a greater deduction made, or the transaction is called off, and the seller is left free to fill his carts and take them away. Sometimes the buyers insist upon these concessions on very flimsy grounds, knowing that most likely the sellers will give in rather than cart their produce back home. Such

cases arise often while cotton is being unloaded at the ginning mills. Objections are then raised by the buyers that it is damped, or that it contains greater quantity of dust and leaves than usual. If they are genuine complaints, reduction in price or deductions are legitimate, but false claims are not uncommon.

In these different ways the sellers are imposed upon, and very often their own agents give them advice favourable to the buyers. Then there are the employees to be paid for. *Palledars* fill the scales and empty them, while the *taulas* do the weighing part. The watermen go round distributing drinking water, and the sweepers clean the market places when the day's business is finished. All have to be paid by the sellers, and the buyers do not share any expenses. This means that on each transaction, apart from the commission, 8 *chataks* (half *seer*) per maund—i.e. Rs. 1-4-0 per hundred rupees worth of produce sold—are deducted in the manner described. Over and above these, and the most arbitrary charge of all, is the one called "charity." Deductions on that account are inadvisable on the very face of it. The sellers do not live where the *mandis* are situated, so they are not interested in the charities and the charitable institutions of that place. Moreover, they might belong to different religions and creeds, and might resent the deductions by the *arhtias* for their own religious and sentimental purposes. Collections on account of "*gaoshala*" and also "charity" (for the most part) are meant for providing enclosures and shelters for stray cows and bulls, and for feeding and looking after them. Now the greatest anomaly about the whole affair is that the grain merchants in the *mandis*—being invariably devout Hindus—themselves set the animals free on religious occasions and, later, when they are found wandering in "destitute" condition, or suffering from disease, they are taken in these "homes" and cared for. And the sellers from outside have to pay for their upkeep. Certainly, this is not fair dealing, and, most of all, compulsion should never be introduced for such a cause. It is bound to create dissatisfaction. The writer was informed by the managers of various banks in those markets that the sellers disliked these deductions, and paid only because

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they could not take their produce elsewhere. They had no choice in the matter.

The following are the sellers' expenses in the Lyallpur *mandi*, Punjab:

Items	Local Shops Percentage on Sale Value			Co-operative Com- mission Shop, Ltd. Percentage		
	Rs.	a.	p.	Rs.	a.	p.
1. Commission	0	12	6	0	8	6
2. <i>Palledari</i> (portage)	0	3	9	0	3	9
3. <i>Tolai</i> (weighment)	0	3	9	0	3	9
4. <i>Chungi</i> (paid to buyer's servants)	0	1	3	0	1	3
5. Brokerage (to buyer's <i>dalal</i>) ..	0	1	3	0	1	3
6. <i>Shagirdi</i> (to <i>arhtia's</i> apprentices)	0	1	3	Nil		
7. <i>Dharmau</i> (charity)	0	1	3	Nil		
8. <i>Gaoshala</i> (charity)	0	0	3	0	0	3
9. <i>Changar</i> (sundry payments in kind)	0	12	3	0	3	6
Total	Rs. 2	5	6	Rs. 1	6	3

The same features are present in the Lyallpur market as well. Payments have to be made to the buyers' men, *dalals*, servants, etc. People who render different services during the course of the sales are to be recompensed and charities satisfied. In all, about Rs. 2-5-6 per cent on the sale value is spent by the sellers, or is deducted: this amount sometimes represents as much as a maund of wheat. In that market it is interesting to compare the charges levied by the *arhtias* and the Co-operative Commission Shop, Ltd., which was started in December 1919 and undertakes business on behalf of members as well as non-members. It helps them in the disposal of the agricultural produce and is run on co-operative lines. The Commission Shop has been boycotted many a time by the local commission agents, but no permanent loss was suffered. The sellers make substantial savings in the marketing charges by disposing of their produce through the Shop: the considerable reductions under items 1 to 9 above are

apparent. In spite of the fact that the Shop declares dividends—though not more than 8 per cent—to its shareholders, it works on a much cheaper basis than the non-co-operative businesses. No deductions are made by it on account of items 6 and 7; but it allows small sums to the buyers' employees because it has no control over the buyers who insist on those payments. And as they are common to the Commission Shop and the commission agents, uniform terms have to be offered to them. On the whole, the sellers save Re. 0-15-3 per cent in dealing with the shop: in other words, this the extent to which they are imposed upon by the *arhtias*.

The tragedy, however, is that although a number of Commission Shops and Co-operative Sale Societies are functioning at present in the Punjab, further development is hampered by many difficulties. They make little appeal to the small peasants, the majority of whom does not sell in the markets. The members are lukewarm in their support, and do not always use the co-operative agency for the sale of their goods. There are management troubles too: it is very hard to get reliable and experienced staff on the existing grades of salaries. Again, many growers and *beoparis* are either indebted to, or have accepted advances from, the *arhtias*; and quite often there are old-established relations between them. So the sellers from the countryside, as also the agents of the merchants in the *mandis*, take their produce to the *arhtias* rather than to the co-operative institutions. These factors combine against the Commission Shops doing greater business. Nevertheless, their financial position seems to be sound, and sales are increasing steadily, though at a slow pace. Unfortunately, similar Co-operative Shops do not exist in the other provinces of Northern India, thus making it impossible to determine how far the charges levied by the dealers are fair or exorbitant. But the Lyallpur market can safely be taken as a typical example, and the arbitrary nature of some of the items has been brought out in the Hapur *mandi* as well. It might be said without fear of contradiction that what is true of these two markets will be applicable all over the country.

Lastly, there is a payment that is made in nearly all the markets

—the octroi duty to the municipal authorities. As a matter of fact this item should have appeared first in the list of marketing expenses, as it is paid before the sellers reach the markets. It acts as a further check on the producers' incentive to market their goods. The very system¹ is an anachronism and becomes a transit duty, as it hinders the free flow of commerce by putting obstacles in its path. Octrois, tolls, and road imposts existed in Europe also, but till the last century only; and now in the most advanced countries they are more of historical importance than a source of revenue. It is the worst form of an indirect tax; and the Indian Taxation Enquiry Committee, 1924-25, recommended its abolition in all forms, but no step has been taken by the Government in that direction. The evil becomes much more serious when the producers, bringing raw materials for disposal, have to pay the duty. Then it amounts to a direct tax on them, as they, already handicapped in the markets, are unable to pass on the burden of the duty: the incidence primarily and finally remains on them. As it is levied at flat rates it discriminates against the producers, for they bring commodities in smaller quantities than the dealers and middlemen. Further, the clerks and peons at octroi posts help themselves freely to the produce, and if the ignorant and illiterate owners dare to protest they are threatened in a number of ways. They are told that they would have to pay higher rate, or that they will be reported to the office and prosecuted for attempt at the evasion of the duty, and so on; or the carts of the offending person would be detained, and thus make him late for the market. This reprisal is most dreaded; therefore no owner refuses to pay

¹ "The history of these taxes is one of many expressions of pious opinion, accompanied by little in the way of practical action. They are the direct successors of the transit duties, the continuance of which was one of the scandals of earlier British rule in India, and the abolition of which by Lord Ellenborough freed the trade of the country from an intolerable burden."—*Indian Taxation Enquiry Committee Report*, 1926, vol. i, p. 291.

Sir Josiah Stamp summed up the case as follows: "In my judgment, both theoretically and on the result of experience, no country can be progressive that relies to any extent upon octroi, which has nearly every vice."—*Ibid.*

something to the octroi-men. Actually, many cultivators in their anxiety to reach the *mandis* early, themselves offer bribes in cash or kind to these persons.

The various municipalities fix their own rates of duties and frame separate rules. In Hapur, wheat, oats, mustard-seed and *gur* enter free, as most of them are subsequently sent out again: hence if duties were imposed they would have to be refunded on export. On the rest of the grains and cotton, duties at the rate of 6 pies per maund are levied. The worst feature of the octroi, there, is that a consignment of less than 8 maunds is treated as 8 maunds, 8 to 12 maunds are taken as 12 maunds, 12 to 16 maunds are taken as 16 maunds, and more than 16 maunds pay duty on each individual maund. This means that under 16 maunds the three maximum limits of 8, 12, and 16 would apply, and that in the matter of larger supplies only will the individual maunds be taken into consideration. Not only is it not a progressive tax, but it operates like a regressive one against all the canons and propriety of taxation. In practice it penalizes small men and favours bigger dealers. The town of Hapur is important only on account of its *mandi*, and there being few other influential and moneyed people the merchants generally get elected to the Municipal Board and frame rules to suit their own interests. In Ghaziabad, a few miles from Delhi, the municipality imposes a duty of 2 annas per cart drawn by one bullock, and of 4 annas on a two-bullock cart. It is hardly a scientific basis for taxation. No doubt, counting the carts and realizing the tax is extremely simple—even children and blind men could do it—but the nature of the commodity brought in, its quality and the quantity are all ignored. In Meerut, in the same region, a duty of 1 anna per maund is to be paid on wheat meant for local consumption, but wheat for export purposes is exempted. A separate *mandi* at Kaisargunj (within the town) has been established as the exporting medium. The duty is payable if any grain goes to the city, but not if it is taken to the *mandi*; and in case the *mandi* sends some to the city the duty becomes due. When wheat is taken to a flour mill it pays the duty, but a rebate of an equal amount is allowed on the flour being exported.

In Lyallpur, terminal taxes of 3 and 6 pies per maund are levied on the export of wheat and cotton respectively.

The terminal tax on imports, being an octroi without refunds, is usually less satisfactory than the other, as it lacks some of the advantages of the latter and contains the defects. And the imposition of a terminal tax on exports is worse still. If it is levied on goods leaving by rail, it would tend to divert traffic to roads and waterways, particularly for short distances. If, on the other hand, it is realized on all the commodities leaving the municipal limits irrespective of the mode of transportation, it would become for all practical purposes a transit duty. Moreover, in case the exporters succeed in making the consumers in importing towns pay the tax, it would give an incentive to the producers there to grow those crops themselves; thus marginal land would be brought under cultivation, and the local supplies of agricultural products having increased it would thereby diminish the demand for the hitherto imported goods. The tax on exports, therefore, would react and hit the municipalities themselves unless the burden is borne by the exporters, and is not passed on to the importers elsewhere. Under such circumstances, although a tax on exports, on account of larger quantities dealt with at a time, would be easier to collect than an octroi duty, and though the annoyance and hardship caused to the sellers from the countryside would cease to exist, yet in all probability the agriculturists would not escape the tax. The wholesale merchants would, no doubt, pay it initially; but they would be in a strong position to pass on the tax to the original seller by giving him lower prices. As an overwhelming portion of the produce brought to these markets is ultimately exported, there is not much possibility of the local demand for consumption purposes entering into competition. So, from the point of view of incidence, the effects of an octroi duty and a terminal tax on exports are much the same: the producers pay in both the cases. Apart from the financial consideration, no justification can be found for the retention of these duties.

The following sources of revenue have been earmarked for the

local authorities in India¹: (1) Toll; (2) Tax on land or land values; (3) Tax on buildings; (4) Tax on vehicles or boats; (5) Tax on animals; (6) Tax on menials and domestic servants; (7) an octroi; (8) a terminal tax; (9) Tax on trades, professions, and callings; (10) Tax on private markets; (11) Tax imposed in return for services rendered, such as (a) a water rate, (b) a lighting rate, (c) a drainage tax, (d) a scavenging, sanitary, or sewage rate, (e) fees for the use of markets and other public conveniences. In the leading countries of the West the State imposes light taxes on agricultural land, which, consequently, provides the chief means of income for the local bodies. The opposite is true in India: because land is the primary basis of provincial revenues, little enough is left for the District Boards. The peasant's taxable capacity is notoriously low, yet a land cess, circumstances, and property tax and a few tolls are paid by him. The conditions are, however, different in the urban areas. Direct and indirect taxes, rates and fees are imposed by all the municipalities; and, particularly in Northern India, octroi duty or terminal tax is an important source. Either because it is very paying, or because of its indirect nature, the municipal boards in common do not like the idea of abolishing it. Moreover, the members are not prepared to tax themselves to a greater extent, and are afraid that if more direct taxes are imposed—whether in addition to or in replacement of the existing indirect taxes—they would lose favour with the electorate.

Nevertheless, if the Government were to abolish the octroi duty at a stroke, the municipalities would be obliged to look out for fresh revenue, and may choose to enhance or to adopt—as the case might be—rates on property, or taxes on companies, retail trade, entertainment, hotels, domestic servants, luxuries, etc. So far as the *mandis* are concerned, on account of the exemption or rebate that is already granted on the produce imported for export, they would not lose much through the abolition of the octroi duty. The total amount of revenue they collect from this source must be small, and they should not find any great difficulty

¹ Vide *The Financial Developments in India*, by C. N. Vakil, 1926.

in replacing it by a direct tax on transactions in agricultural products. Therefore, if a light tax is imposed on the sale or purchase of filled godowns, or on the "futures," it would not involve much hardship on the dealers, and, at the same time, they would be unable to pass it on to the producers. All authorized transactions, as will be explained in a succeeding chapter, are registered with the various Chambers of Commerce and Companies. The Municipal Boards can enter into agreements with them—or, by means of a by-law, it can be made obligatory upon them—so that they may realize the tax along with their own commission. The Chambers, in return, should be allowed a small percentage of the collections. Thus, the municipalities would receive revenues from a direct tax instead of an indirect one as hitherto. And the expenditure incidental to the maintenance of the octroi departments would be avoided.

CHAPTER VI

TRANSPORTATION

WITHOUT discussing the theory of transport, it might be pointed out that good communications create place utilities and are a prerequisite for the development of the resources of a land. Transportation is needed because all parts of the world do not grow or manufacture their entire requirements on account of the uneven distribution of productive factors. Transportation makes the production of goods possible in places where they can be produced more economically than at the place where they are consumed, and it enables consumers to secure goods that cannot be produced locally.

Adequate transportation is sometimes the result of intense economic activity in a country, e.g. Great Britain, where the organized pressure and the concerted action of a number of important and growing enterprises create an urgent demand and push the transport system forward. In India industrialization is still far off, and it cannot be depended upon to develop transportation. The only alternative left to her, under these circumstances, is to work on a reverse plan: means of communication to precede and, so to say, set the stage for economic expansion. The existing communications are unsatisfactory, being slow and costly. The Agriculture Commission was of the opinion that "In spite of the developments of the last half-century . . . India must still be regarded as a backward country in respect both of railways and roads."¹ The producing areas lie quite often at long distances from railheads and arterial roads. Transport involves a severe strain on the villager's bullocks, so he is compelled to depend principally on the middleman to take his produce to the market. Even if he is enterprising enough to reach a *mandi*, the thought of carting his grain back on rough roads and bumpy tracks distresses him and forces him to dispose of it at the price offered. Knowing

¹ *Report*, p. 369.

this, the *arhtias* take advantage by making low bids. Good communications would make it possible for the farmer to reach different and alternative markets, and if he fails to strike a favourable bargain he need not find it difficult to bring his produce back home. The orientation that is being given to Indian agriculture makes the provision of increased transportation facilities much more necessary. All efforts towards scientific marketing are doomed to failure under the existing system of transport. It is proposed to study the communications of India under four headings—Rail, Road, Water, and Air.

RAILWAYS

Suggestions had been made earlier to start building railways in India, and in 1845 three experimental lines were sanctioned; but it was not till 1853 that a definite policy towards their construction on a serious scale was adopted by the Directors of the East India Company. In that year the Governor-General, Lord Dalhousie, pointed out the social, political, and commercial advantages that would result from connecting the chief cities by railways. The Mutiny, following soon after, brought home the possible military importance of trunk lines to join the Presidency towns with the interior. The government of India passed, at the same time, from the hands of the Company into those of the Crown, and by 1859 contracts had been placed for the construction of 5,000 miles of line. Since then the railway system has expanded beyond recognition. On March 31, 1935, the total route mileage of all the railways, whether State-owned, and either State-managed or managed by Companies on behalf of the State, property of Indian States, or lines which were the property of Railway Companies, stood at 43,021, and consisted of various gauges of 5 ft. 6 in., 3 ft. 3 in., 2 ft. 6 in. and 2 ft., the first two predominating.

The railways have conferred a great boon upon India and might be said to have changed her economic structure. Distant places have been connected with one another, and quicker as well as cheaper transport has been provided. Apart from the moral and

educational benefits that usually follow in the wake of the development of a country's communication, substantial material advantages have resulted. Jointly with the irrigation system, railways have put an end to the worst results of failure of the monsoon. If conditions of scarcity prevail in one part of the country on any occasion, supplies are rushed there from the other parts and suffering is alleviated, and the prices do not rise to prohibitive levels. They will be found to vary, as compared with other centres, by about the cost of transportation. Before the railway era, very wide differences in prices usually existed.¹ With the development of the means of communications, and subsequently to the break-up of the isolation of the self-sufficient village,² prices were levelled up and became uniform. Formerly an abundant harvest proved as little a source of gain to the peasant as a poor one, for the village was more or less cut off from the rest of the country, and there used to be only the local *bania* to buy on a large scale, which meant that the prices could go down very low.³ Although most of the localities in the countryside still have the local *banias* as the main purchasers and suffer from poor communications, yet the prices move, if remotely, in sympathy with those ruling in the *mandis*, and great divergence seldom prevails.

A comparison of the railway mileage of India, on page 138, with some of the leading agricultural, as also industrial countries of the world, will, however, reveal that she is very much behind in respect of mileage in relation to area and population.

Australia and Canada have less line to the square mile, but they are greatly in advance from the point of view of mileage in relation to inhabitants; while the highly industrialized countries with large populations, viz. Britain, France, Germany, Japan, and United States, have more line per square mile. In 1921, the late Sir William Acworth and his Committee⁴ severely criticized the

¹ *Prices and Wages in India*, Government of India (Calcutta, 1893).

² *Vide Industrial Organization*, Morison, op. cit.

³ *Vide Enquiry into the Rise of Prices in India*, by K. L. Dutta (Government of India, Calcutta, 1914).

⁴ The Indian Railway Committee, 1920-21.

then existing system of financing and managing the Indian railways. He pointed out that a great commercial enterprise was being run on unbusinesslike principles, and that it had been made a milch cow by the Finance Department of the Government of India. Insufficient capital programme was being laid down, and all the earnings of the State railways were taken over by the Central exchequer. There was no consistent long-term policy, as the funds placed at the disposal of the railways fluctuated wildly from year to year in accordance with the general budgetary

*World Railway Mileage at the end of 1933**

Countries	Lines open (in miles)	Miles of Line to 100 square miles	Miles of Line to 1,000 people
1. Australia.. ..	27,952	0·9	4·2
2. Canada	42,364	1·2	3·9
3. France	26,076	12·3	0·6
4. Germany	36,246	19·9	0·6
5. Great Britain	20,251	22·7	0·4
6. India	42,961	2·4	0·1
7. Japan	13,987	9·5	0·2
8. U.S.A.	245,703	8·3	2·0

* Source: (a) *The Stateman's Year Book*, 1935; (b) *Railway Statistics of the U.S.A. for the year ended December 31, 1933*. Published by Slason Thompson, Bureau of Railway News and Statistics, Chicago.

position of the Government. These factors has been responsible for the comparatively stunted growth, and even lack of efficiency in certain cases. As a direct result of the recommendations of the Committee, the Railway Finance was separated from the General Finance in 1924, and two separate budgets were thenceforth prepared every year. The policy of taking over, for direct management, State lines managed by different companies when the periods of the individual contracts expired was also adopted in 1923. These measures ushered in an era of intense activity in the State Railways in particular, and in all the Indian Railways to a certain extent.

An idea of the progress achieved during the last fifteen years

can be obtained from the accompanying figures. Although more miles of line were opened during the earlier period, since 1931-32 almost a halt has been called to new construction on account of the financial depression. In his budget speech for 1935-36, when the returns showed definitely favourable signs, the Chief Commissioner of Railways declared that a re-examination was to be

*Mileage and Equipment of Indian Railways**

Year	Route Miles open	Locomotives	Coaching Vehicles	Goods Vehicles
1920-21	37,029	9,450	24,951	203,302
1921-22	37,265	9,832	25,240	209,829
1922-23	37,618	10,153	26,458	215,982
1923-24	38,039	9,988	25,245	212,829
1924-25	38,270	9,994	25,884	221,260
1925-26	38,580	10,024	26,005	226,566
1926-27	39,049	9,863	26,469	230,726
1927-28	39,712	9,544	25,518	228,271
1928-29	40,950	9,442	25,733	225,553
1929-30	41,724	9,474	26,056	225,926
1930-31	42,281	9,557	26,713	227,601
1931-32	42,813	9,480	26,704	227,457
1932-33	42,961	9,376	26,529	225,668
1933-34	42,953	9,248	26,362	223,830
1934-35	42,021	9,056	23,533	224,001

* Source: *Administration Reports of the Railway Board* (Government of India).

undertaken of all the projects which had to be postponed owing to shortage of funds, and which at the time they were last examined were expected to give a fair return on the capital expended. It is difficult to understand why practicable and profitable schemes were held up at all during the past five years. No doubt traffic had decreased and the earnings had gone down, but that was a temporary phase only. When there was inactivity all round and money was cheap, the railways by launching big construction schemes could have gained: loans could have been obtained at lower rates, and material and wages also were cheaper. Moreover,

by developing their system then the railways would have been prepared to meet the revival of business, the "come-back" of which is clearly noticeable from the quantity of goods carried, and the receipts therefrom during 1933-34 and 1934-35.

History, it seems, is going to repeat itself. During the Great War there was a cessation of the developmental activities in India. Railway supplies could not be imported from England, putting the repairs and replacements seriously in arrears; and some materials were even sent out of the country to the different war fronts. When peace was re-established and the subsequent boom set in, the railways were found to be poorly equipped and not prepared for the increased traffic. They could not handle the quantity offered for transport, and a scandalous state of affairs prevailed. Restrictions were imposed on the movement of goods: instances of delay of several months involving severe losses to the traders were common, and some foreign markets were actually lost. Scores of such complaints were placed before the Acworth Committee by various witnesses—traders, officials, and non-officials. The railways admitted their inability to transport all goods, and pleaded shortage of equipment, inefficiency of system, and paucity of funds. Later on the situation greatly improved, as will be seen from the figures in the preceding table. But, recently, the progress has not been maintained, and the situation has been allowed to deteriorate. Whatever locomotives and rolling stock have been placed on the lines during the past five years have been in replacement of, and not net addition to, the existing stock, and all the equipment scrapped has not been replaced either. This is the reason why the number of locomotives, coaching vehicles, and goods stock has consistently gone down after 1930-31.

There is a danger that if an all-round expansion is not started in the near future, the congestion on lines and the shortage of stock experienced fifteen years ago will be repeated once more when prosperity returns and commerce increases. "Railroad facilities should be developed somewhat in advance of our other industries so that there will be, during normal times, an unused margin to take care of rapid increases caused by industrial expan-

sion or wars.”¹ Though a continuance of the policy of inactivity would be unsound, there was some justification for it in the recent years. Since the depression started in 1929, the quantity of goods carried went on decreasing till 1932-33, and rendered a large number of wagons idle; hence it was not regarded as urgent to replace all those that were scrapped, and no net additions were made. Concurrently, all the departments were retrenching, and the capital expenditure was naturally suspended unless it was absolutely necessary. In the meantime, the efficiency of the Indian railways had increased as a result of the recommendations of the Acworth Committee, and also due to the forward policy adopted subsequent to the taking over of some small lines by the bigger railways and the State management of the E.I.R. and the G.I.P. The service has been, on the whole, speeded up and made more frequent, so that the same equipment can be used more than before: the engine hours, as well as train miles, have increased. More powerful locomotives have replaced the old ones, enabling longer and bigger haulage. From a study of the figures on page 142 it will be seen that the average miles a ton of goods was carried (column 4) increased from 227·6 in 1920-21 to 273·4 in 1924-25, and was 249·9 in 1925-26; but, later, when the post-War boom was over, the average mile decreased, and this tendency has once more been noticeable during the recent depression.

There is one point on which the railways are open to strong criticism—that of rates and tariff. This is not the occasion to go into the question of the fixation of rates, but we can notice—in columns (6) and (7) above—how the “Receipt per ton” and the “Average Rate charged per Ton per Mile” have been increasing. In a few isolated years there has been some fall, but it has generally been more than made up by the subsequent increase; not even 1931-32 and 1932-33 are excepted. It might be said in defence of the railways that on account of less quantity carried, the expenses per unit went up; and as it cost more to carry goods, the rates also show an upward trend. This increase can be inter-

¹ *Elements of Marketing*, Converse, op. cit., p. 73.

Goods Returns of Indian Railways and General Index Numbers of Price*

Year (1)	Quantity carried (in million tons) (2)	Ton Mileage (in millions) (3)	Average Miles in Ton of Goods was carried (4)	Earnings from Goods carried (million Rs.) (5)	Receipt per Ton (in Rs.) (6)	Average Rate charged per Ton per Mile (in pice) (7)	General Index Number (unweighted), 1873 as 100 (8)
1920-21	95.5	19,920.9	227.6	479.7	5-0	4.62	281 (1920)
1921-22	93.6	17,736.0	205.6	495.2	5-5	5.36	236 (1921)
1922-23	93.7	18,324.8	195.6	580.2	6-3	6.11	232 (1922)
1923-24	98.2	18,840.8	192.8	602.8	6-2	6.13	215 (1923)
1924-25	77.8	21,268.7	273.4	664.5	8-9	6.00	221 (1924)
1925-26	79.6	19,898.9	249.9	644.2	8-1	6.21	227 (1925)
1926-27	85.8	20,374.7	237.4	650.8	7-9	6.12	216 (1926)
1927-28	89.8	21,902.2	243.9	694.1	7-12	6.08	202 (1927)
1928-29	90.8	21,889.2	241.0	711.6	7-13	6.24	201 (1928)
1929-30	87.4	21,524.6	246.4	688.3	7-14	6.14	203 (1929)
1930-31	83.4	20,406.5	244.7	644.1	7-12	6.06	171 (1930)
1931-32	74.6	18,146.8	246.0	587.3	7-14	6.15	127 (1931)
1932-33	70.6	17,202.5	243.7	568.9	8-1	6.35	126 (1932)
1933-34	76.5	18,706.8	237.4	615.9	8-1	6.32	121 (1933)
1934-35	84.5	20,351.6	240.8	643.5	7-10	6.07	—

* Source: (a) Administration Reports of the Railway Board, 1920-21 to 1934-35; (b) Index Numbers of Indian Prices 1933 (and supplements).

preted both as cause and effect: the ever-increasing rates can be one of the factors responsible for the smaller quantities of goods offered for transit; and the rates might have been rendered higher and higher due to diminution in the goods carried. But in spite of an appreciable decrease in the quantity carried, the ton mileage has decreased slightly only; therefore, as we have noticed, the average distances a ton of goods was carried have increased on the whole. Taking 1920-21 as 100, the ton mileage in 1933-34 shows a fall of about five, while "Receipt per ton" and the "Average rate per ton-mile" in the same year register an increase of 60 and 37 respectively. Thus it is evident that the "Receipt" and the "Rate" did not go up automatically because less goods were carried. Therefore the natural conclusion is that the rates were not sympathetic to the movement of goods, and that they have operated against the best interests of the country. In 1934-35, however, the situation underwent an all-round improvement.

In column (8) of the same table will be found the unweighted General Index Number of Indian Prices—figures for 1934 are not yet available—the diminution therein has been 160 during the period under review. In order to help their farmers in marketing crops cheaply, the leading exporting countries of agricultural products, e.g. Argentina, Brazil, and Hungary, have made substantial reductions in their railway rates and granted rebates within the last five years. Not only have no such reductions been made in India, but the rates, on the other hand, have been mounting up. Possibly on account of heavy working expenses, or owing to continued losses on passenger traffic and strategic lines, the goods have been made to bear heavier rates than they were capable of, particularly during the recent period of rock-bottom prices. In the following table we compare the "Freight Receipts per Ton per Mile" of some important countries. It should be pointed out at the outset that, in India, a much larger proportion of the total goods carried comprises agricultural commodities, which on account of lower value and greater bulk cannot pay as high rates as manufactured articles. The position in the industrial countries is just the reverse; therefore, other things being equal,

average freight rates higher than those in an essentially agricultural country should be expected there. Two characteristics of the Indian figures stand out: firstly, she had the cheapest freight rates in 1921, but that is no longer true; and, secondly, while the goods receipts per ton-mile of all the countries, under comparison, have decreased since then, those of India have increased.

*Freight Receipts per Ton-Mile of a few Countries of the World**

Countries	1921 (in pence)	Latest available Figures
1. Australia	1·69†	1·62‡ (1933)
2. Canada	0·58	0·46 (1933)
3. Great Britain	2·07	1·37 (1933)
4. U.S.A.	0·63	0·51 (1932)
5. India	0·43 (1920-21)	0·57 (1934-35)

* Source: Official Year Books and Statistical Abstracts.

† Average of the State Railways of five States only (Queensland excluded).

‡ Average of all six.

The business community in India often charge the Railway Board with a "discriminating" freight policy; and colour is lent to such accusations by instances like the following. According to the N.W.R. Tariff of June 1935, the freight rate for one maund of wheat consigned from Amritsar to Karachi was Rs. 1-9-5 on small lots, and Re. 0-12-7 on wagon loads. The corresponding rates for flour were Rs. 1-12-1 and Re. 0-12-7 respectively, with a minimum weight of 300 maunds in the case of the latter. Similarly, from Lyallpur to Karachi the rates per maund were (1) for wheat: Rs. 1-6-2 in small lots, and Re. 0-11-8 in wagon loads; and (2) for flour: Rs. 1-8-6 and Re. 0-11-8 respectively, with a minimum load of 300 maunds for wagon loads. This shows that so far as small consignments from the Punjab were concerned, it was more expensive to send flour to Karachi than wheat. It is true that in wagon load the rates were the same for wheat and flour, but the rule of the minimum had been added in the case of flour, thus handicapping the small exporters again. There are no big com-

bines or industrial pools in the Punjab, so the individual quantities exported at any time could not have been very great, except those sent out by foreign firms, like Ralli Brothers. Naturally the effect must have been to discourage the export of flour, and it may have caused losses to flour mills. No justification whatever could have existed for differentiating between the two. How does the handling and transporting of flour in small lots prove more costly than equal weights of wheat? And if the imposition of the 300 maunds minimum for flour was necessary to enable the carriage of large quantities at cheaper rates, why should not the same principle apply to wheat? Such should not be the policy of a State railway. If a company railway had introduced "discrimination," the Railway Board should have, as a matter of principle, put things right. It is, therefore, all the more surprising that permission to the above effect was granted to the North-Western Railway.

In 1934 the railway authorities agreed, upon the incessant demand of the commercial community and the legislators, to revise the general classification of goods; and in his Budget speech for 1935-36 the Chief Commissioner announced that they were proceeding with the task. But because detailed investigations of the traffic in all important commodities had to be undertaken and vast calculations to be made, he said that it would take some time before the work could be finished. This is a step in the right direction, and it is hoped that a reduction in rates will result, and that the Railway Board in framing the new rates will not have the interests of the railways only at heart, but that the rates will be so fixed as to help in the movement of goods, the marketing of agricultural produce, the opening up of new fields of activity, and the creation of wider markets. All the forms of transportation are public utility services, and they should consider the greatest good of the customers to be of primary, if not of sole, importance. The future possibilities of expansion and the development of the country and her resources should be uppermost in the minds of the administration when constructing railroads and equipping them. The railways, those under State management in particular, should work hand in hand with the "nation-building" depart-

ments of the Government. The institution of the Railway Advisory Committees is specially welcome, but, as suggested by the Agriculture Commission, the Provincial Director of Agriculture or the Marketing Officer also should be made an *ex-officio* member, so that he could safeguard the agriculturists. There is another matter of importance in this connection. The first Railway Rates Advisory Committee was appointed in 1926, consisting of a President and two members—one representing the railways and the other the commercial community. After ten years of actual working, it appears that the Committee functions under certain handicaps. As its name signifies, it is not a judicial body, but a recommendatory one; therefore it generally tries to effect compromises. These weaknesses would disappear if, as recommended by the Acworth Committee, a Railway Rates Tribunal on the lines of its prototype in England and with full judicial powers is set up. At present the railway authorities are free to accept or reject the findings of the Rates Committee. To avoid this defect, the Committee of 1921 had recommended the establishment of an impartial Tribunal, but an Advisory Committee was created instead.

Apart from the common policy laid down by the Railway Board, the different systems are, through their own initiative, expected to increase the efficiency of their railways. The individual internal organization, as also the co-ordination of activities between them, should occupy most of their attention in the future. Better working will result in lower costs and greater service, possibly in both. Considerable time can be saved through improvements in the performance of the various station operations, e.g. in shunting wagons to and fro, in the formation and breaking up of trains, in the waits in sidings, and in loading and unloading. Some of the marshalling yards and goods sheds and depots have become out of date, and involve delays in handling the freight which has outgrown them. It is a matter for satisfaction that attempts are being made towards a scientific solution of these problems, as is evident from the enquiry undertaken by Mr. Pope in 1932-33. The danger, however, is that during the rainy days we adopt all

sorts of economies and changes with a view to reducing operating expenses, but with the return of palmy days less importance is attached to caution and circumspection. Further, the whole-hearted co-operation of the customers should be obtained and their goodwill won at all costs, even by granting small concessions and making a few minor allowances, which usually have a great psychological effect. Where, for example, demurrage is paid if the wagons are detained beyond the specific time, it is worth trying if a small discount on early unloading could induce the consignees to release the wagons sooner. The existing facilities and services should be improved and supplemented. More suitable timings, faster journeys, and greater advertising and personal attention should add to the popularity of the carriers. A few cold-storage vans are run these days: their number might well be augmented. Milk vans, standard containers for small parcels and packages and similar other conveniences might also be introduced. With the railway efficiency increased and more conveniences provided, the public is bound to respond enthusiastically. Large amounts of money will have to be invested in these enterprises, and losses may be incurred at first; but, later, these innovations should pay their way and ultimately prove profitable. It may be added that motor competition is already causing concern to the Indian railways, but, barring a few localities and certain light goods, it is so far confined almost exclusively to the carrying of passengers. If, on the other hand, the goods services are not bettered and rates not sympathetically framed, the railways may after a few years find that they are losing appreciable quantities of goods traffic as well to motor transport.

HIGHWAYS

This brings us to the other chief basis of transport. The construction of roads, taken up in about 1840, was again primarily for military and administrative purposes; and a great impetus was given to it after the Mutiny. Later on the beneficial results were realized, and that led to a more extensive laying out of roads. The various Statutory Bodies, e.g. the Famine and Agriculture

Commissions, have emphasized the peculiar fitness of highways for eradicating famines; the last-named brought out the importance of roads as an integral part of a country's communications, for the marketing of agricultural produce. By far the major part of India is at the moment untraversed by metalled roads. Generally, cattle tracks or paths exist in the countryside, without having been previously planned, and with no embankments or drainage. The result is that for the dry months of the year they are full of fine dust—sometimes more than ankle deep—and hide large holes and

*Road Statistics of the World on January 1, 1933**

Countries	Road Mileage†	Road Mileage to 100 square miles	Road Mileage to 1,000 people
1. Australia.. ..	460,103	15	69·1
2. Canada	398,320	12	37·0
3. France	406,090	190	9·7
4. Germany	216,674	120	3·4
5. Great Britain	176,791	200	3·9
6. India (British)	225,280	17	0·7
7. Japan	635,399	430	9·4
8. United States	3,042,780	100	24·1

* Vide National Automobile Chamber of Commerce, New York, 1934.

† Mileage of city streets is not included in these figures.

fissures underneath, made by the big crushing wheels of the heavy bullock carts. And when the rains start the tracks are transformed into pools of muddy water and swamps. Then there are the *kuchcha* (unsurfaced) roads which, no doubt, are planned by engineers, and have embankments and drainage, but the characteristics of these unmetalled roads also are essentially the same as those of the country tracks—dust, ruts, and mud. Traffic is not easy on these roads either. It is only on the metalled roads that vehicles move easily and at a fast pace, but unfortunately such roads are comparatively few. India's poor position in respect of highways is evident from the statistics given above: it will be noticed that she has one of the lowest mileage of roads according to area, and absolutely the lowest in relation to population.

This state of affairs is due to two things—insufficient expenditure on the construction of roads, and the wrong policy adopted in carrying out the road programme. Probably because they did not yield any direct return, not much money could be found to finance the construction of roads. The first consideration in building roads was strategic necessity. Cantonments and military outposts had to be connected with one another: only lately the Khyber Railway and Road have been completed at a cost of tens of lakhs of rupees. A secondary factor, but one important from the point of view of civil authorities, was the need for linking up, for administrative convenience, the subdivisional headquarters and *tahsils* with the district headquarters. After these two requirements had been satisfied, the policy should have been to spread a network of arterial and branch roads in order to develop the country. We have mentioned earlier that the railways of India were constructed, at least in the beginning, partly for military and administrative purposes. The highways also followed the same lead, with the consequence that both ran more or less parallel to each other. The roads should have essentially been designed as feeders of the railways, and to provide a complementary system. Instead, both the transport systems handle the same traffic and compete with one another. So long as motor locomotion had not started, the defects of the Indian road system had not been noticed; but with increased use of cars and buses the railways began to suffer losses, and attention was invited by them to the wrong lines on which the highways had been developed. This competition is not to be deplored as it acts as an incentive to the railways to set their house in order, and makes them realize that their monopoly of transport, of passengers at least, is over. The worst feature in the growth of highways, however, was that the country has not been opened up, and the rural areas are still cut off from the railheads and the main roads. The responsibility for unsatisfactory progress in the road system and for the comparative isolation of the villages rests to a very great extent on this wrong-sided development. Thus not only no specific encouragement was offered, but the facility of cheap and

quick transport was also not provided to the agriculturist to market the produce himself. He was already labouring under the handicaps of small consignments, poor quality, ignorance, possibly indebtedness to the village money-lender, not very happy traditions of the markets, etc., and with the addition of backward communications the odds were too much against his selling direct in the *mandis*.

Goods are transported by road in Northern India in the form of human loads, on the backs of pack animals—ponies, donkeys, camels, oxen, and buffaloes—and in carts drawn by the three latter beasts. Leaving out the first method, which is inhuman and cruel, among the rest the pack animals are at an advantage on account of their great mobility. They do not need roads, and provide faster transportation than carts, but their weakness lies in the fact that they can carry smaller loads and are useful for short distances only. The capacity of the different beasts of burden varies according to their strength and the nature of the commodity, but the normal load of a pony is 1 to 2 maunds, donkey 2 to 3 maunds, ox 4 to 5 maunds, he-buffalo 5 to 6 maunds, and a camel 6 to 9 maunds. All these animals are more or less widely employed, with the exception of the camel, which is ordinarily found in western United Provinces and the Punjab only. The camel cart is used to a lesser degree, and solely on metalled roads. So the chief means of road transport for produce, both in the rural and urban areas, are the bullock- and buffalo-carts. The haulage of each depends, obviously, upon the number and the strength of the beasts, the condition of the roads, and whether the carts are two-wheeled or four. A two-wheel two-bullock cart can draw, over rough roads, 12 to 20 maunds—or, on an average, about 15 maunds—from the village to the markets and towns. Given better roads, a good pair can draw 30 to 40 and even 50 maunds of grain in a four-wheeler cart. Sometimes, only one ox is employed—but on *pucca* roads only—drawing about 20 maunds to the railway station. As buffaloes are stronger, though slower, than oxen they are employed over very trying roads. The question of alternative transport arises only when he has the means to pay for

his choice, otherwise the small producer always requisitions whatever beasts he owns.

The following figures show that the number of motor vehicles is very small in India, and that she is rather backward when compared with the leading countries of the world; but they are fast increasing, and with better and additional roads the growth is expected to be much greater. Motor trucks as carriers are not

*World Motor Vehicles on December 31, 1933**

Countries	Total Motor Vehicles	Population per Vehicle
1. Australia	561,109	12
2. Canada	1,051,231	10
3. France	1,890,174	22
4. Germany	690,000	95
5. India and Burma	122,779	2,874
6. Japan	105,857	626
7. United Kingdom	1,725,025	28
8. United States	23,827,290	5½

* National Automobile Chamber of Commerce.

popular so far mainly because they prove more expensive than the animals which live on any sort of dry fodder, and do not cost the owners much in money. Motor transport cannot reach the countryside as communications are bad; moreover, the value of small individual consignments does not warrant the engaging of mechanized transport. But in the Punjab, for the carrying of grain, cotton, and goods, and in other provinces also for transporting fruit and vegetables, milk cans, and country liquor in casks, etc., lorries are increasingly employed by big dealers. There were 40,427 heavy motor vehicles (lorries, buses, etc.) throughout India up to March 31, 1934. This branch of transportation is awaiting the construction of new roads to make a serious bid for the carrying of light-weight goods, particularly for short distances. Once motor services get organized, and when the existing highways are

¹ *Indian Year Book, 1935-36.*

improved and new ones built to open up the villages, it would be difficult for the railways to avoid the loss of traffic.

The policy underlying the building of roads in India needs a complete change. Most of the provinces have no comprehensive programme to cover all classes of development, although there is an urgent need for more and better roads, and for feeders to the railways. Up to now they have been financed out of revenues, and the recommendations of the Indian Road Development Committee, 1927-28, were also in the same direction. The Petrol Duty imposed by the Government of India can help in the maintenance of the existing roads only, and the Committee itself suggested it for that purpose, but the great problem is the further construction of branch roads. This cannot be carried out on any large scale with the present resources; therefore loans should be raised by each Provincial Government. In 1933 Messrs. Mitchell and Kirkness surveyed the whole situation pertaining to roads and railways in India, and suggested that the construction of roads should be financed out of separate funds.¹ The Road Funds thus created should be administered by the Road Development Boards, to be set up in those provinces also where they have not yet been established. The Boards should serve as clearing-houses between the Public Works Departments, District and Local Boards, and other authorities controlling roads: co-ordination and unification, not undue interference and domination, should be the common aim. The railways would, by co-operating in this scheme and when rural parts are opened up, ultimately get greater freight. For short distances, especially for carrying passengers, motor transport might offer successful competition, but for long and big haulage the railways will always be able to hold their own: hence, on the whole, the latter will not be the losers with the addition of new

¹ They said: "We believe, therefore, that only by a comprehensive scheme of development of all roads on a consistent plan, can the present lack of balance in the road system be corrected; and that, to be effective, such a plan must be impartially financed from loan funds to the extent to which the provision for future maintenance can be relied on. Such programmes as exist are more for development of main trunk roads than for all-round improvements."—*Report*, p. 68.

traffic. Therefore a close co-operation between the Road and Railway Boards, in opening new roads and lines in the future, becomes necessary.

There was no statutory bar to the operation of road services by State-managed railways, and with a view to giving similar powers to certain domiciled railway companies (chiefly light railways) the Indian Railways Act was amended in 1933. Further, the Government of India, after considering the Mitchell-Kirkness Report, convened in April 1933 a conference of all Provincial Governments, ". . . which passed certain resolutions with a view to checking undesirable competition. The Government of India, then, entered into correspondence with local Governments as to the action to be taken to implement the resolutions adopted at the Rail-Road Conference."¹ Later, in January 1935, a meeting of a body called the Transport Advisory Council, and which it is hoped will be a permanent institution, was held. It consisted of the members of the Governor-General's Executive Council in charge of matters relating to communications and official representatives from each province. A statement prepared by the Council, formulating a policy to secure the co-ordinated development of road and rail transport, has since been placed before local Governments with a view to its adoption by them. The various railway administrations have also taken suitable measures (e.g. lowering of rates and fares, accelerating of services, and—in a few instances—running omnibuses) to combat the road motor competition.

WATERWAYS

In pre-British days the inland navigation of India was very important. There were no railways; and, though some roads did exist, they were none too good. The rivers, particularly in Northern India, were peculiarly free from rapids and falls. The Indo-Gangetic plain, level and fertile, and traversed by a number of big rivers and their tributaries, provided, with few exceptions, satisfactory conditions for water transport. This resulted in the growth of regular traffic, and most of the principal cities sprang

¹ *Administration Report of the Railway Board, 1934-35*, vol. i, p. 41.

up on the river banks. Despite the absence of navigation canals, river transport was taken up wherever circumstances permitted. Gradually, with the introduction of railways and largely because the authorities did not foster and develop it as they did the railroads and highways, water navigation declined. The railways were faster and more efficient, and, on occasions, they appear to have employed unfair methods of competition.¹ The greatest weakness in the river transport system was the lack of organization and funds. Consequently it has all but been wiped out. In Upper India it is only in Eastern Bengal that produce is still carried to any appreciable extent in boats.

Irrigation canals cannot be used for navigation purposes for the obvious reason that, in order to maintain a perennial supply of water needed for cultivation, dams are built across the rivers to control the flow, and impediments in the form of gates are constructed across the canals. By operating these gates it becomes possible to regulate the supply and allow ample water throughout the year. Otherwise, during the winter and early summer, when the usual floods are over, the normal level of water would be too low to reach the cultivator, and the canals would be useless for irrigation. Navigable canals are few in India, but the great rivers are still navigable for long distances and for vessels of varying tonnage—the Ganges up to Cawnpore (at least for small craft), and the Brahmaputra up to Dibrugarh. The Indus was navigable up to Dera Ismail Khan (a distance of 800 miles inland); but, since the opening of the Sukkur Barrage, the canals utilize almost all the water in the river when it is at its lowest level.² So the Indus can be said to be no longer fit for permanent navigation by steam cargo boats. Small rivers are slowly getting silted up; and pests, like water-hyacinth, are rendering the passage of vessels of even low tonnage difficult in the Bengal and Assam rivers.

Suggestions for reviving traffic on Indian waterways are made sometimes, but the question is what agency should be

¹ Vide the evidence given before the Acworth Committee, *op. cit.*

² Vide "The Lloyd Barrage," by Sir Arnold Musto, *Journal of the East India Association*, January 1935.

entrusted with the task. If railways are performing their functions cheaply and satisfactorily, there is no occasion for subsidizing water transport. Whether the Provincial Governments help it by means of subsidies and bounties, or they take over the administration themselves and finance water transport, it would involve taxation on the people for some time at least. In addition to the operating expenses, the cost of building, improving, or maintaining the waterways should also be considered. Therefore, unless the idea is to open up a certain part of the country, which is served by no other form of communications at present, and which has natural advantages for water transport, it is not a sound policy for the State to finance navigation schemes. As rivers are particularly suitable for moving heavy freight, they should be developed where there is a possibility of reducing the transportation charges appreciably. The areas which are not reached by the existing railways deserve first attention, and, if they are found to hold out good prospects, should be helped by the Government. The channel or the river itself will require constant care; and if transport services are to be provided, the best course would be for the State to manage them. Most of the important railway systems in Northern India are State-owned and managed, so if the water transport is also nationalized it will lead to greater co-ordination between the two, and will contribute towards the smooth running of the systems. Cut-throat competition and unfair rates are the bane of the badly organized transport agencies, and either cause the stoppage of the services or drive out the weaker parties so that the stronger enjoy a monopoly. The best results can be obtained if all concerned co-operate with one another and try to give satisfaction to the public. The aim should be development through fair competition, and not stagnation and excessive rates through private monopoly.

AIRWAYS

Recently a new limb has been added to the transport system of the world. Regular air passenger services are operating daily in the leading countries of Europe and in the United States of

America. They are also carrying mails and small parcels, and are developing fast both in speed and capacity. They have now become an essential part of the communications of those countries. India is directly linked with Europe and England in the west and Australia in the east by the Imperial Airways, Ltd., which holds the contract for carrying mails. Dutch and French liners also fly across India on their way to the East. Thus India is fairly well connected by air with the outside world. Within the country itself, three air lines are working: Indian Trans-Continental Airways, performing weekly service between Karachi, Delhi, Calcutta, Rangoon, and Singapore, and return; Tata Air Mail, weekly service between Karachi, Bombay, and Madras, and return; and Indian National Airways, weekly between Calcutta and Rangoon, and daily between Calcutta and Dacca and return. A scheme is under consideration to connect Calcutta with Madras and Bombay as well.

This shows that during the last six years India has made serious efforts, successful so far, to establish air communications between some of her important towns. Being a country of long distances, she provides ample opportunities for air traffic, but this must necessarily be restricted to the carrying of passengers, mails, and of light and valuable goods. Heavy freight, by its very nature, is out of the scope of air transport. When night flying is started the journey between Karachi and Croydon would be reduced from five days, as at present, to about $3\frac{1}{2}$ days. With the operation of faster, safer, and bigger planes, the traffic is bound to go up; but what will be the extent of this increase is beyond prediction. According to the statistics of Indian aviation for 1933-34, the value of merchandise imported during the year was Rs. 50,60,311, compared with a value of Rs. 8,28,786 during 1932, and consisted of diamonds (60 per cent of the total value of imports), other precious stones, and bullion and currency notes. The value of merchandise exported was Rs. 44,206 against Rs. 15,353 in 1932, and largely consisted of gold. Indian people, as a whole, can hardly be yet called travel-minded, and to become air-minded will be perhaps a matter of generations. However, with planes which

take less space for landing and taking off, with better and more landing-grounds and aerodromes, and with a lowering of the prices of planes and of fares and rates, a great expansion of aviation can safely be expected. Aeronautics, in spite of the tremendous growth during the last two decades, is still a young science and we cannot be very precise in foretelling its future in India.

CHAPTER VII

FINANCING MARKETING ACTIVITIES

AGRICULTURE is so different from the manufacturing industry that even in the field of finance it has to receive separate treatment. The comparatively small unit of production; the absence of full control over yield and quality; lack of complete division of labour; want of co-ordination, co-operation, and combination; the fact that the farm is not merely the basis of the peasant's economic activities, but also his home—to mention a few—invest agriculture with an importance of its own. Add to these the distance from urban centres, the universal conservative nature of the farmer, the long time elapsing between the sowing and the selling processes, and the unsuitability of land as security for loans, and we get the peculiar problems of rural finance. It involves short-, intermediate-, and long-term credits: the first is required for the ordinary expenses of production which are of a recurring type; the second, for the non-recurring expenditure resulting from the purchase of farm animals and implements, and from the effecting of small improvements on the fields; and the third, for non-recurring expenditure on the acquiring of land and property, the carrying out of big improvements, and the paying off of old debts.

It is with rural credit under the first category, i.e. short-term credit, that we are concerned here. Particular note should be made of the truth that as the cultivator has to finance his enterprise for months before he can receive any return, credit is more necessary or unavoidable for agriculture than for industry. “. . . the lesson of universal history from Rome to Scotland is that an essential of agriculture is credit. Neither the condition of the country, nor the nature of the land tenures, nor the position of agriculture affects the one great fact that agriculturists must borrow.”¹ Although this was written forty years ago, it still holds good in its broader aspect, and all the more so in India. It is

¹ *Report on Land and Agricultural Banks*, by Sir F. A. Nicholson, 1895.

deplorable, therefore, that the special difficulties of agricultural finance are not commonly recognized; it consequently leads to the neglect of marketing problems. Of all the marketing functions, that of financing stands out as one of the most important, if not the most important one. We have already traced the successive stages that the agricultural commodities pass through on their way from the threshing-floor to the market, as also the reasons responsible for the quick disposal of crops by the producers. This situation has, to a great extent, arisen owing to the non-provision of credit facilities. The pressing needs of the under-capitalized growers, combined with the easy-going methods of the merchants, offer no inducement to the development of careful methods of marketing.

The marketing finance of Northern India might well be studied in two parts: the financing of the producers, and the credits made available to the *arhtias* and other wholesale merchants. The loans granted to the farmer, irrespective of the source, are for cultivation purposes only. The itinerant and the village money-lenders and the co-operative societies stipulate with the growers that the debts would be repaid soon after the crops have been harvested, which, in other words, means that the produce should be sold off and not stored for better prices. This, again, is in a great measure due to the wrong conception of the word "production." All along, in the agricultural industry, it has been regarded as synonymous with cultivation and has not been given a wider scope to include the marketing operations as well. Under these circumstances the creditors cannot be blamed for their insistence upon the repayment of their money early after harvesting. They lend on the would-be security of the produce, and are apprehensive that if it is not sold in a short time their funds will remain locked up. And if they do not keep dunning, they think the peasants may sell the produce on the quiet and spend the proceeds, or other creditors may step in first: thus the only security may disappear. Moreover, the major part of the money lent to the cultivator belongs to merchants of one sort or the other—co-operative societies contributing a minor share only. The itinerant money-

lenders—*Pathans* (wrongly called *Kabulis*), *Rastogis*, etc.—are essentially traders. They go about vending goods, mostly cloth, for cash or on credit, and also advance loans from time to time. The village money-lenders are either local *zamindars*, prosperous peasants, *baniyas* (keeping grocery shops), silver- and goldsmiths, or cloth merchants. Seldom does any one of them make money-lending his whole-time occupation; in the rural areas it is nearly always a supplementary source of income. The only occasion when the agriculturist has funds of his own is when he sells the produce; and all the countryside merchants stock their shops in anticipation of the seasonal demands. Naturally the trader-creditors want their capital to be repaid as early as possible in order to invest it in their main business, and they can ill afford to lend for a longer term. Even if they were in a position to do so, they would be unwilling to advance for the purpose of storage, as they are very often themselves interested in the sale and purchase of primary products. This is the crux of the whole problem.

The existing credit agencies are without sufficient finances to keep their own businesses going, and to have clear surpluses to lend to the cultivator for the holding of the crops. They usually have small means, and work on a small scale and on an individual basis: most of the capital employed is owned by them or by their families. But sometimes petty traders borrow from the bigger ones, or from the professional money-lenders of the neighbourhood. And occasionally they secure loans from the *arhtias*, or work as their agents for the purchase of agricultural commodities. Though they may not have been able to meet the villagers' demands in full, the local trader-creditors, as distinguished from itinerant money-lenders, have undoubtedly helped a great deal in the cultivation of different crops. Peasants go to them whenever they are in need of money, offering hardly any security. The limited assets of the *ryot* are too well known to be repeated here. No other creditor will, probably, be prepared to lend any money in such circumstances. These money-lenders belong to the villages, and take part in the social and religious activities of the people. They have an identity of interest in the matter of residence, and

common attachment to agriculture; hence they may be ranked higher than the ordinary lenders of money. Their relations with their debtors are more than those of mere creditors: they are sometimes even regarded as benefactors. This has been one of the main reasons which have kept back the progress of the co-operative movement. It would be idle to deny, however, that the present system of providing credit to the rural areas is defective; it is inadequate and expensive, and quite often involves usurious rates of interest. In the absence of any organized agency, it has worked well, on the whole, and can still prove useful if handled properly. What is needed in this matter is the registration of money-lenders and the regulation of the rates of interest, as recommended by the various Banking Enquiry Committees.

The other big source of rural credit is comprised of the middlemen, who finance cultivation with the specific object of buying the produce. The *beoparis*, peripatetic dealers, and agents of wholesale merchants either work with their own capital, borrow from the professional money-lenders, or get funds from the *arhtias*. The ultimate sale of the produce is determined accordingly: in the first two cases they are free to choose their own customers; but in the third one the *arhtias* naturally are the purchasers. The middlemen, as well as the village traders, having the same intentions, advance funds to the growers on certain conditions. A low rate of interest is generally charged if the produce is to be sold to the creditor about a certain date and at a fixed price which can safely be expected to be very favourable to the dealer to make it worth his while to offer such terms. The peasant does not realize the full extent of his future loss, and is for the time being concerned with getting cheap money. This practice is peculiarly common in the case of those commercial crops—cotton, jute, and sugar-cane—for which manufacturing plants have been set up in the country. Jute is grown over a restricted area, and the idea of buying up the future supply in order to create a shortage in the market and thus force the prices, or to ensure a regular flow to the mills, is uppermost in the minds of the middlemen and agents respectively. Probably, of all these

crops, therefore, the system of advances is most prevalent in the jute trade.

A great activity, on similar lines, is noticeable at present with reference to sugar-cane. Since the grant of protection under the Sugar Industry Protection Act of 1932, the sugar industry in India has been going through a boom period. By the end of 1934-35 there were 142 factories making sugar by modern methods as against 32 in 1931-32. The mills give direct advance to the growers and also enter into agreements with contractors to obtain a regular and sufficient supply of cane. In the latter case the contractors finance the cultivators. Advances of this nature and made by the sugar factories, run on indigenous lines and manufacturing brown sugar, are particularly exacting in character. The practice, typical of the Rohilkhand region of the United Provinces, where it is known as *khandsari* business, entails great hardship on the growers who are expected to have the cane crushed on their own and then to take the juice to the factories. In this way, not only do they get low prices customary to such advances, but they also pay for the crushing of the cane out of their own pockets. Further, they are not required to bring in all the supplies in one or two instalments, but have to stretch it over a number of trips so that the factories may be evenly fed. Thus it involves an extra labour for the agriculturists, possibly hindering them from attending to important work at home. The system of advancing loans in order to get a lien over the ensuing crops is not, however, so much in vogue in the case of cotton. One of the reasons is that cotton is grown extensively over half of India, so the spinning- and weaving-mills cannot find it easy, even if they have any such intentions, to deal directly with the growers. Moreover, as Indian mills use foreign cotton also, they do not live in fear of the home supply being taken up by rival concerns, or the market being cornered by them. In the commodity markets they usually have their representatives—more often agents—to buy for them; but they do not, as a rule, finance the peasants. If advances are made to the latter, it is done by the middlemen on their own behalf, and not in the name of the cotton-mills. Nevertheless, small gins

and presses, established in the growing regions, do frequently buy straight from the cultivators and also advance money to them.

Apart from the loans made on the condition of future purchases at previously fixed prices, money is also advanced with the stipulation that the produce would be sold by the peasant at the current market rates, or that the creditors would get the first option on the produce. The rate of interest on advances under the first category is usually low, often nominal, while in the latter instances it is much higher. Both impose a disability on the grower because he is bound down to the creditor and is not free to dispose of his produce wherever he gets a higher price. Despite the defects, these loans do help him in meeting the expenses incurred during the cultivation period: he can pay for the recurring agricultural charges, and support his family in the meantime. From the point of view of marketing, however, he does not derive any benefit. The financing of marketing operations is no doubt achieved, but it is in the interests of merchants and dealers only, and not of the *ryot*. If he has contracted to sell to the creditors, he would get low prices; and if he is free to sell in the open market, he would be faced with the familiar troubles that he has no staying power, that the creditors are dunning for the repayment of their loans, and that sales in an overlaid market would bring the prices down still further. Excepting the cases of the peasants who accept advances and consequently agree to sell to their creditors, no widespread compulsion or undue influence is exercised by the money-lenders to make the debtors take their produce to them. The producers are generally free to sell as they like. But on many occasions they go to the lenders of their own accord, because the latter are often the only big buyers in the neighbourhood. The fact that extra low prices are received by the peasants, in such circumstances, should not be attributed to their indebted conditions: it would be due to the absence of competition among the purchasers and the resultant monopolistic position of the dealers. This, again, need not be interpreted to mean that these sellers and buyers meet on an equal level. After all, there cannot be a complete equality, as they happen to be debtors and creditors

respectively: borrowers, no doubt, are always handicapped, but the evil is not so great or universal as is commonly presumed.

The only agency of an organized nature to lend to the peasants, and not controlled by traders and moneyed people, is the Co-operative movement. It was started officially in 1904 with the passage of the Co-operative Credit Societies Act. None of the indigenous methods for dealing out credit in the rural areas proving

Results of the Working of

Provinces	Population (millions)	Number of Agricultural Credit Societies	Societies of all kinds	
			Total Number	Per 100,000 inhabitants
1. Madras	46.7	11,301	13,581	29.1
2. Bombay	21.9	4,502	5,816	26.6
3. Bengal	50.1	19,859	23,538	47.0
4. Bihar and Orissa ..	37.7	8,455	8,901	23.6
5. United Provinces ..	48.4	5,100	6,051	12.5
6. Punjab	23.6	16,396	21,395	90.7
7. Others	41.1	7,730	9,082	—
8. Total (British India)	269.5	73,343	78,364	32.8

satisfactory, some scheme for improvement had to be put into practice. It was recognized that the desirable scheme ought to fulfil certain conditions. (i) The loan must be easily available, and should be cheap. (ii) At the same time, it must be hedged in by certain safeguards. Mere cheapness could not be the aim. What was wanted was reasonable credit from reasonable creditors. (iii) Along with lending, the cultivator was also to be educated in self-help and providence. (iv) Not only indebtedness, but the causes of indebtedness were to be tackled. Previously, various attempts had been made, but they had failed to achieve their objective. *Taqavi* loans advanced under the Land Improvement Loans Act of 1883 and the Agriculturists Loans Act of 1884 could not be expected to provide funds for the normal needs of the

cultivator, not in sufficient amounts, as their use is restricted almost entirely to meeting the emergencies occasioned by drought, flood, or some other calamity. Moreover, they never found much favour among the villagers on account of the Government control and management which meant strictness and even harshness in collection. Legislation, to stop the mortgaging of land and its subsequent transfer to the money-lenders, in the form of Land

*Co-operative Societies in 1933-34**

Number of Members of Agricultural Credit Societies	Members of Primary Societies of all kinds		Working Capital of Agricultural Credit Societies (Rs. 000)	Working Capital of all Societies	
	Total Number	Per 1,000 People		Total (Rs. 000)	Number of annas per head of Population
—	8,83,100	18.9	—	16,18,67	55
2,36,869	5,87,649	26.8	3,87,39	16,16,74	118
4,55,794	7,77,809	15.5	5,72,89	17,65,75	56
2,30,048	2,56,802	6.8	2,09,17	5,75,47	24
1,03,615	1,52,930	3.2	99,67	2,23,96	7
4,90,427	7,07,689	30.0	8,52,00	18,46,82	125
—	2,78,300	—	—	9,96,85	—
—	36,44,279	13.5	—	86,44,26	51

* Sources: (a) Statistical Statements relating to the Co-operative Movement in India; (b) Provincial Administration Reports.

NOTE.—Agricultural Credit Societies include both limited and unlimited, but exclude Grain Banks.

Alienation Acts could not be expected to provide any scheme of financing. So, in the end, through the elimination of the alternatives, and owing to its capability to fulfil the tests mentioned above, co-operation was chosen as the proper agency for the provision of credit and the removal of indebtedness in India. For some years all seemed to be going well with the movement. It was fortunate in being sponsored by a band of zealous officials, who worked in a missionary spirit. The Act of 1904 was revised in 1912 to remove certain defects, and Committees of Enquiry

have from time to time taken stock of the situation; but, on the whole, the movement barring a few honourable exceptions, has failed to touch more than the fringe of the problem.

In the three Presidencies and the Punjab greater progress has been made than in the rest of the country; but, even there, only a fraction of the population is affected. Statistics reveal the disappointing condition of the co-operative societies in the major provinces of India. Figures about the agricultural credit societies also have been added to give an idea of their present position.

Considering the entire movement, one is particularly struck by the poor results obtained after thirty years of working. The Punjab is the most advanced province in matters co-operative: it leads India in all respects. In relation to its population, the numbers of co-operative societies and of the members of primary societies and the working capital are distinctly higher than in any other part of the land; yet, only ninety societies exist per *lakh* of people. Three per cent of the inhabitants are members of the primary societies, and Rs. 7-13-0 is the working capital per head of the population. Its neighbour, the United Provinces, on the other hand, has the worst standing in the co-operative field. Bombay and the Punjab, each with less than half the population of the United Provinces, have outstripped it. It occupies the lowest place in every way throughout the Indian Empire in spite of the fact that it was one of the pioneers. Even Bihar and Orissa,¹ which was created a new province as late as 1912, and which has much smaller population and resources, has forged ahead. Whether we take the figures of the different provinces, or of British India as a whole, we are confronted with the same situation everywhere. Dwarfish growth and insignificant achievements have failed to make any appreciable impression upon the life of the people.

The agricultural credit societies are in an equally bad plight, if not worse. It is not possible to calculate what part the loans advanced by the rural credit societies form of the total borrowings of the cultivators, but an attempt at an approximate calculation was

¹ Orissa was constituted a separate province in April 1936.

made by the United Provinces Banking Enquiry Committee. It was rather unfortunate that other Provincial Committees in Northern India, while finding out the total rural indebtedness of their respective provinces, did not estimate the credits then available in the different regions. In 1929-30, however, the total rural debt of the United Provinces was about Rs. 124 crores, of which mortgage debt represented 70 crores. "On the basis of the observed distribution between the various classes of money-lenders, a sum of Rs. 3,94 *lakhs* is the amount of debt outstanding to the credit of Government and the co-operative credit societies."¹ The balance was made up in the following manner:

					lakhs
1. Advances in kind	..	..	..	..	11,00
2. Professional moneylenders	..	..	..	..	15,62
3. Tenants	..	..	..	..	17,36
4. Landlords	..	..	..	..	6,08
Total					Rs. 50,06

So that out of Rs. 54 crores (intermediate and short-term debt), or Rs. 124 crores if we include long-term borrowings as well, the public agencies—including co-operative societies—lent less than 4 crores of rupees. As this sum included *taqavi* loans also, the net share of the co-operative societies must be regarded as a very minor one indeed. This is a sad commentary when one remembers that it is the result of a generation's pioneering efforts. At such a rate of development, it becomes impossible to visualize the time when the movement will be able to provide, say, one-half or even one-third of the credit needed by the agriculturists. It should be pointed out in the end that the money lent by the co-operative societies is mostly for the domestic requirements of the peasant, and for financing cultivation: it is seldom meant to help him in keeping back his produce for better prices. Thus we see that he is not financed, either by the private lenders, the Government, or the co-operative societies—except to a very small extent by some solitary Sales Societies—for the marketing of

¹ *Report, 1931, vol. i, p. 121.*

the agricultural commodities. It is here, probably, that the weakest link in the chain of marketing functions in India lies.

One of the contributory causes to the poor success of the movement, as a whole, has been its one-sided development. As will have been noticed from the figures above, by far the greatest attention has been paid to the creation of credit societies to the neglect of other branches of co-operative activities. The mere provision of cheap and facile credit should not be the desideratum. If the people do not learn providence and thrift, if they cannot buy their requirements cheap, if they do not protect themselves and their assets through insurance, if they do not practise self-help by mutual-help in the form of co-operative irrigation, arbitration, and consolidation of holdings societies, if they do not adopt improved methods of agriculture, and lastly, but most emphatically, if they do not get sufficient return for their enterprise—in a word, if all these complementary though essential functions are not performed—the movement will never make any headway. The absence of these activities leads to unsatisfactory production. What benefit can be expected to accrue if the produce, financed by the credit societies during the cultivation stage, is thrown on the market all together. At the moment, a simultaneous co-operative progress along the whole agricultural front is needed; and there is the greatest urgency about advancing loans for marketing, as distinct from cultivation, purposes. This point will be discussed in greater detail at a later stage; but it might be mentioned here that when they have gathered their harvests, short-term loans should be allowed to the cultivators by the co-operative societies on the security of the crops. This would enable them to meet their ordinary expenses without being forced to sell the produce in an unseemly hurry; and, in the meantime, they would be watching the markets for a rise in prices and disposing of their goods according to their individual judgment. In this manner the harvest time glut in the markets could be avoided, and the steadiness in prices—even the possible subsequent rise thereof—could benefit the farmers also, and not the merchants only, who are the sole storers at present.

This brings us to the second part of the chapter, viz. how the marketing operations of the wholesale dealers are financed. As the *kuchcha arhtias* are essentially commission agents, and seldom buy on their own account, the question of financing them does not assume so much importance. No doubt, in the majority of transactions they arrange, they have to wait some time before the buyers pay them the purchase price, and, as they pay cash to the sellers soon after the deals go through, they remain out of funds for that period. But they generally possess capital enough for their business, or make private arrangements. Their credit mostly depends upon their assets and reputation, and not upon the ownership of the produce the sales of which they negotiate. It is in this respect that the *kuchcha arhtias* differ from the actual buyers, the *pucca arhtias*. The latter buy either on behalf of big retail merchants, mill-owners, and exporters, or in their own interests. They are normally in account current with their customers, and also receive advances in case of large orders. The funds are transmitted to and fro in the form of *darshani hundis* (sight bills) and cheques. What we are more concerned with at this stage, however, are the purchases made by the *arhtias* on their personal account. It is they, pre-eminently, who buy to store, using their own funds, or borrowing from the private bankers and joint-stock banks on the security of the stored produce. Almost throughout Northern India, *arhtias* store agricultural produce—in *kothas*, *khattis*, and *golas*, as has been described in an earlier chapter—for rise in prices. The procedure followed on such occasions is that they buy in the local *mandis*, and, if they are not supplying outside orders, fill up the different storing-places. When the *arhtias* require funds, they go to the managers of the banks and apply for loans. Branches of the Imperial Bank of India and of a few joint-stock (like the Allahabad Bank, the Central Bank of India, and the Punjab National Bank) and private banks (like Beopar Sahayak Bank of Meerut) are now established in all the important *mandis*. When dealing with new merchants, or with those about whom they are not very sure, the banks make it a point to inspect the storing-places before they are

filled, and do not lend on produce stored without their previous examination.

On the merchants proving their title to the stored produce and upon giving all the relevant details about the quality, quantity, and time, of the storage, the banks usually advance up to two-thirds of the existing value of the goods, or sometimes even a little more, according to the financial status of the firm: as a rule, the banks keep a margin of 30 per cent at least. If the prices fall, the difference is recovered from the original storer, so that the margin between the total value of the godown security and the money advanced is seldom allowed to go below 30 per cent. As the loan is initially obtained by the storer, it is he who is responsible for the payment of this difference, as also for the interest when it becomes due. Liability for the payment of interest is not transferable with each sale of the stored produce. The storer is further responsible for the repayment of the loans irrespective of the storage changing hands in the intervening period. The rate of interest charged by the banks on such advances varies between 5 and 10 per cent according to the market rate. A separate class of investors has recently come into existence in the Punjab for financing wheat: they are particularly important in Amritsar and Lyallpur. Their *modus operandi* is similar to those of the banks, but they charge lower rates of interest, and accept lesser margins owing to very small establishment expenses. In Bengal, a large number of loan offices, owned and managed privately, are also functioning. They advance freely to the *beoparis* and other small merchants, and, through their branches and agencies, to the cultivators as well.

Although the produce stored remained hypothecated to the creditors, it can be sold—or, at least, the title to it—many times over before it is finally taken out. The intermediate purchasers rely on the invoice prepared by the storer, and setting out the details pertaining to the quality and quantity of goods. The last purchaser, on opening the storing places, is entitled to claim a rebate from the original storer if there is any discrepancy between the actual goods and the items included in the invoice. Physical

examination of the commodities is not possible in each transaction, as the banks put their own locks and sign boards on such places in order to inform the people that the storage, being financed by them, is pledged to them, and cannot be opened without their permission. The private bankers are, ordinarily, satisfied if the borrowers hand over the keys of the godowns to them; but the joint-stock banks play for the safer game, and want to give publicity to their holdings. This has rather unfortunate effects, as it discourages the dealers from borrowing freely from the banks. Owing to a false notion of prestige and a regard for appearances, many people consider any sort of borrowing as derogatory. Similarly, some *arhtias* think that were the fact that they borrow from the banks and place their stored produce as security with them, to come to light, their rivals would make capital of it, thereby harming their social standing and reputation. That this is the conviction of a number of wholesalers—happily their prejudice is decreasing—cannot be unknown to those who have visited the *mandis* and talked to these merchants. One thing is clear, that the banks cannot be blamed for the precautions they take: they cannot afford to run any risks. The private bankers have a more intimate knowledge of their clients. Possibly they meet on social and religious occasions, and may also do some business together; thus coming to know more of each other and of the private lives. The managers of the joint-stock banks are not in the same favourable position. Moreover, they have to carry out the orders and the rules issued by the head offices. They are naturally allowed some discretion and freedom of action, but that applies to matters of details and procedure, and not to principles. What the banks, however, can do to encourage a greater pledging of the stocks is to adopt a more liberal policy and be satisfied with smaller margins like the indigenous bankers.

The fears of the dealers, on the other hand, are unjustifiable. They do not realize that even the best and the most sound individuals, concerns, and governments borrow occasionally. They may have their funds invested for the time being in various enterprises or bonds, which cannot be liquidated, or the liquid-

ation of which may be inadvisable: therefore, no fluid resources may be available at the particular moment. Modern methods of production and marketing necessitate a considerable delay from the beginning of the production process until the finished product reaches the consumer. While goods are lying in storage, some expenses may have to be met, or there may be opportunities for further business. It is evident that these would be genuine grounds for borrowing, and no discredit need be attached to the persons who do so. In a later chapter the institution of licensed warehouses in India will be discussed. From the point of view of market finance they would be useful in two ways. Their establishment on a fairly large basis would remove the present lack of storage accommodation; and, as the practice grows wider and wider, no stigma would be attached to the people who store in the warehouses. Moreover, the produce of all persons would be merged together while in storage; and, as the locks and signboards now put by the individual banks would disappear, no person need be abashed to transact business on the strength of the warehouse receipts. Secondly, these receipts should be recognized by law as negotiable instruments of title; so the dealings in stored produce would become easier and probably cheaper. It would also lead, through an increased circulation of the warehouse bonds, to the greater financing of the agricultural products.

Let us examine now yet another aspect of the marketing transactions. Among other risks inherent in all commercial enterprises, the chance of loss through price changes, failure of supplies, and other similar uncertainties, particularly in the ultimate disposal of the farm produce, is very substantial. Market news, weather reports, crop estimates, and trade and other returns tend to reduce this risk to a great extent; but speculative contracts are also entered into with the same aim. Hedging, as the process is called, while not usually insuring completely against loss from price fluctuations, does provide, when scientifically done, a means of reducing to the minimum the probabilities of great loss in a large number of cases. It is effected by a person buying and selling in the spot and futures markets at the same time. Thus, he may

buy or sell actual commodity for cash and sell or buy respectively on contract. So that, through the simultaneous sets of transactions the chances of loss are reduced and those of gain improved. In principle, a futures contract is a document representing goods promised for delivery within a specified time in the future. According to this condition, delivery can be demanded and acceptance enforced. But, in practice, delivery or the settlement of the difference is usually permitted, and on any day within the fortnight or the month for which the contract is issued.

In all the organized *mandis* in Northern India dealings in futures take place regularly and are based, broadly, on the practice followed in England and America.¹ They should not be confused, however, with the options contracts, dealt with later, which are also to be found. As a matter of fact, some authors go to the length of making a sharp distinction between these two: the former—the protective dealings—are called “hedging” and the latter are designated as purely speculative; and both are ordinarily included in the term “future trading.” Whether the futures contract be for grain, cotton, or jute, it contains the same essential provisions, adapted, of course, to meet the needs of the particular commodity. The “hedges” are authorized, and their regulation is undertaken by the various Chambers of Commerce or Associations controlling the markets. They consist of future sales and purchases, and can be entered only between the *arhtias* who are members of those bodies and through the *dalals* registered with the same. Both the merchants and brokers are required to deposit cash, in varying amounts, or offer personal sureties in order to respectively qualify for membership and registration. The rules and regulations governing them necessarily differ from one market to another, but the procedure is more or less uniform in all the places. The buyers and sellers, all being *arhtias*, arrange their deals through the brokers, and get them recorded each day by the Secretaries of the Chambers. The transactions take place in multiples of the amounts fixed in that market, and seldom do the commodities actually change hands, though it can be legally

¹ Vide *Future Trading*, by Hoffman, 1932.

enforced. In the majority of cases the system of "offsets" is prevalent, whereby the difference between the contract and the ruling prices is mutually settled on the date of the maturity of the contract. If they do not hear on that date from one party or the other, the Chambers themselves adjust the accounts by debiting the loser and crediting the gainer with the full amount of loss and gain respectively, minus their own commission. This does not imply that in the intervening period those merchants regard the deals as closed—not at all. As time passes on, in the light of the latest information and of the tendency of the prices, they go on contracting for fresh futures; thus insuring the initial transaction with a hedge, this with a second hedge, and so on. But the system of "ringing"¹—meaning the occasional forming of "rings" by a number of merchants to settle between themselves the differences resulting from a series of connected transactions—does not prevail.

Without hedges, violent fluctuations in prices may be caused by the otherwise seasonal demands for articles having seasonal supplies. That is, through hedging operations a tendency towards the stabilization of prices between different times is introduced. By taking the world demand, existing stocks, future produce, and other relevant factors and conditions into consideration, and by trying to forecast their possible repercussions on the seasonal prices of the various commodities, a steady and an even demand for them is created. So far as these attempts are well and genuinely carried out, they have a healthy effect on prices and, in the long run, benefit the agriculturists; but, unfortunately, in the daily operations it is not always so in Northern India. While the Chambers are, on the whole, trying to reform the old practices and establish healthy conventions, many defects are still present. The essentials for a satisfactory hedging market are that not only should it be a continuously liquid and a broad market, but that all interests in the trade should also be represented. The last attribute is conspicuous by its absence in the markets under study. The agriculturists are not eligible for membership, and

¹ Vide Hoffman, *op. cit.*

no one speaks on their behalf, with the result that the markets are monopolized by one party only, viz. the traders. And even then they are not always run on a scrupulously fair basis. When, for instance, the accounts of the members are adjusted, as described above, the rates on the dates on which the periods of the different contracts expire are calculated, this being generally done every evening after the day's work. In the absence of firmly established conventions or rules, being merchants themselves, having no impartial man among them, and not being devoid of ego, many Executive Committees manipulate the day's price to their own advantage. On one occasion the ruling market rate of the day would be accepted as the official price, and the next time the average of the last few days, the week, or even of the month, would be declared. Similar other defects exist in the futures markets and their management.

Probably the greatest harm is done when amateurs and believers in get-rich-quick begin to "tamper" with the market, not to mention the purposeful "shocks" that are administered by the expert speculators and capitalists who are after "big money." These tactics throw the whole machinery out of order, and produce violent fluctuations. The inexperienced speculators are particularly "dangerous" when they operate on the basis of "options." As these transactions do not need any "cover"—which is necessary in "hedges"—and as only a nominal premium of a few annas per maund is all that is required for them, the *tezi* (call), *mande* (put), and *nazarana* (double) *saudas* (options) degenerate into pure gambling: all the more so as they are unauthorized. The Chambers do not take any cognizance of them, nor is the membership of and registration with these bodies necessary. The "options" are not legally enforceable under the Indian Contract Act because actual delivery is not contemplated. No regular contracts are entered into, and no records are maintained; thus the whole system becomes irresponsible. The parties exchange mutually signed notes stating the terms of the deals; but if the second party intends to default there is nothing to prevent it. On account of these unwelcome features, some Committees do not allow their

members and brokers to transact such business within the limits of their markets. Just as the net result of the "hedging" operations is to steady the prices, the effect of the "options" is to upset the equilibrium and to unsteady the prices.

Speculative abuses, viz. manipulation of prices, trading by inexperienced persons, and trading with insufficient capital, have led to a strong criticism of the purchase and sale of futures contracts. The agriculturists, because of their ignorance of the factors governing the fluctuations of the prices, have sometimes suffered. This has naturally resulted in a controversy whether trading of this kind creates a wholesome effect on the prices. Many are convinced that, morally, speculation is a very reprehensible practice, but they are in doubt as to its economic value. As Chairman of the Canadian Commission on Futures Trading, 1931, Sir Josiah Stamp once remarked that "... it is repugnant to think that a useful function is dependent upon a gambling instinct." It should, however, be borne in mind that although it is possible to perfect hedging in theory, it may not be feasible to keep it perfect in practice. But it does, in normal conditions, tend to make the market more even. Those in the trade—producers, merchants, manufacturers, etc.—who operate with the desire to insure against risks, are factors in this direction; whilst those who indulge in speculation for the sake of profit rather than to reduce risks provide the disruptive forces.

CHAPTER VIII

THE STAPLE COMMODITIES

ALL agricultural crops, as distinct from market-garden products (e.g. fruit and vegetables) and plantation crops (e.g. tea, coffee, and rubber), have certain characteristics in common. They are essentially seasonal in nature, and are affected in a like manner, though in varying degrees, by the elements. They are based in the majority of cases on the small-scale individual efforts of the peasants. They are grown, harvested, and sold in much the same fashion. The system of financing and the method of handling them in the markets does not greatly differ either. Besides these common features, however, each commodity has its own peculiar problems as well. One may be grown solely for the world markets, and may or may not be faced with competition from abroad. Another may be consumed locally and also exported to various countries, in which event the conditions guiding its production will not coincide with those of the first. Yet a third may be primarily meant for home consumption, and may have to contend against foreign imports. These and several other allied or independent factors necessitate a separate study of the particular questions pertaining to the staple agricultural commodities of Northern India.

A. WHEAT

Wheat, to begin with, is commercially the most important cereal in the whole world; and is a great staple of food for human beings. The consumption of wheat is considered the hallmark of a country's civilization and standard of living. Other grains also are widely eaten in different parts of the world, e.g. rice in the Far and the Middle East, and in about half of India; maize by the majority of the native population in Africa, and, along with millets, by a large section of the people in India; and rye in Russia

and the eastern parts of Europe. But wheat is consumed extensively in all the advanced countries, hence it "is the most international in character."¹ It is of special significance to two provinces, the Punjab and the United Provinces. Together² they contributed, in 1934-35, about 62·3 per cent (Punjab 3,498,000 tons, or 36·0 per cent, and United Provinces 2,554,000 tons, or 26·3 per cent) out of the total wheat outturn of 9,725,000 tons for the whole of India. With the exception of rice, dealt with hereafter, which is mainly exported from Burma rather than from India proper, wheat and flour were the only foodstuffs ever exported from India in any appreciable volume; but recently they have dwindled to insignificant figures. The causes responsible for this decline have been twofold: firstly, the world factors affecting Indian trade; and, secondly, the local factors working from within. It is impossible to say how much decrease was due to one or the other, but both combined have brought about the present state of affairs. We will now deal with these in a little detail.

But for occasional spurts Indian exports of wheat have all along been on the downward path during the decade 1924-25 to 1933-34. Even before the advent of the "Great Depression" the exports of Indian wheat were constantly falling, and after 1929 the defeat—to borrow a military term—became a rout. The absence of steadiness in the decline of Indian wheat exports was primarily due, particularly in the pre-depression era, to the failure of the produce to create a permanent and sure market in the importing countries. The most important reason for this was the inferior quality of the wheat—the result of unsatisfactory methods of agriculture. The defective system of marketing was another great handicap. Not only was there the qualitative competition from the chief wheat regions of the world—Canada, U.S.A., Argentina, Australia—but a quantitative struggle was also going on. The volume of world production of wheat had been consistently increasing; hence whilst for the average period 1909-10 to 1913-14 India's share was 9·5 per cent, for 1923-24

¹ *Agricultural Crisis*, p. 22.

² Including the Indian States situated in the two provinces.

to 1927-28 it came down to 8.2 per cent, and for 1928-29 to 1930-31 (the starting-point of the depression) it was 7.2 per cent only. Moreover, the chief wheat-producing countries were growing more and more for export purposes, thus offering greater competition.

Due to the excessive world production of wheat and the consequent low prices, foreign wheat was shipped to India in increasing quantities. The situation through large imports of cheap wheat,

*Indices of Changes in World Trade**

1929 as 100	Imports			Exports		
	1932	1933	1934	1932	1933	1934
India	38.7	31.5	31.2	30.4	30.8	28.7
Total (World)	39.3	35.0	33.7	39.1	35.5	34.4

* Source: *Review of World Trade*, 1935, p. 29. NOTE.—Recorded values, reduced to United States gold dollars. Special Trade; Merchandise only.

mostly Australian, grew serious to such an extent that in 1931 the Wheat (Import Duty) Act was passed, levying an import duty of Rs. 2 per cwt. on wheat and Rs. 2-8-0 on flour. The total imports of wheat and flour in 1929-30 had been 357,158 tons, and 232,154 tons in 1930-31. Though imposed temporarily, the duties have been extended year after year; but in March 1935 they were lowered to Rs. 1-8-0 per cwt. (equalizing thereby the duties on wheat and flour). On the one hand, over-production with reference to population had been instrumental in precipitating the present depression; and, on the other, the world consumption of wheat per head had actually fallen, thus a broader gulf was introduced between supply and demand. The subsequent and the continuous fall in prices, therefore, threw out the marginal exporters; and India, being one of them, suffered most. Her whole foreign trade was naturally affected to a greater degree

than that of the world. The decrease in the values of exports was more than the reduction in import values, as the latter were being financed through the export of gold from India, following England's departure from the gold standard, and the linking of the rupee to sterling in 1931.

In addition to these external factors, certain domestic handicaps have weakened the resisting power of Indian wheat in the international market. The average yield, as compared with the European countries employing intensive methods, is extremely low: in 1934-35 it was 679 lb. per acre in British India (754 in the Punjab, and 749 in the United Provinces),¹ while in Denmark and Belgium it is usually about four times as much.² For 1923-32, however, the average yield was 680.4 lb. per acre in India, 982.8 in Lower Danubian countries, 1,253.7 in the rest of Europe (ex. U.S.S.R.), and 806.4 in Argentina.³ The use of primitive implements, lack of sufficient and good manure, and the small and the scattered nature of the agricultural holdings keep the yield down. Moreover, greater risks are still run by agriculture in India than in the Western World. Although unceasing efforts are being made to eradicate them, many insect pests and plant diseases continue their toll of the crops. Directly or indirectly, but collectively, all these items increase the costs of production of agricultural commodities.

The unfavourable railway rates for goods traffic have already been discussed, and mention was also made of the Indian Railways discriminating in their freight policy between different articles. Further, we learn that wheat is wholly exempted from import duty if documentary evidence is produced to the satisfaction of the Customs Collector that a contract has been entered into to sell a quantity of wheat flour representing 87 per cent of the quantity of wheat imported in respect of which exemption is claimed, and that the said wheat flour is to be shipped to a

¹ Vide *Annual Estimates of Area of Yield of Principal Crops in India*.

² Vide *Year Book of Agricultural Statistics*, I.J.A.

³ Vide *Wheat Studies*, Stanford University, December 1934, vol. xi, no. 4.

destination outside India before a date specified in the contract. Now, it is permissible in the entrepot trade to refund the duty, or allow a rebate, if the imported goods are re-exported in bulk, without breakage of consignment; but the import of wheat and the export of flour, even though the latter be obtained from the imported wheat, can by no reasoning be put under the category of re-export. It is not the export of the same goods or commodity. Wheat, after importation, is processed or milled, and the result is a new marketable commodity—flour. Owing to this concession, the millers at Karachi would prefer foreign wheat to Indian wheat, being cheaper and of a superior quality too. The Wheat Act was passed to give the home grain a margin to compete in with the Australian wheat; but, with the grant of exemption, the millers at ports are practically asked, if not in so many words, to make their choice between the dear home-grown wheat and the cheap wheat from abroad. Thus, the Indian exporters can supply other countries with flour milled from imported wheat at lower prices than that milled from indigenous wheat; and this, probably, is the main reason why the exports of flour from India do not show a corresponding decline with wheat. The benefit that other exporting countries derive, ultimately represents India's loss as to that extent the exports of flour from home-grown wheat are bound to be discouraged. The rebate on imported wheat would, however, be justified if it were established that the flour milled from the imported wheat and subsequently exported did not compete with the purely national flour, and that the foreign markets would be lost if flour from Australian wheat, for example, was not supplied to them by the millers in India. The recent lowering of the import duties on wheat and flour, and the fixation of both at Re. 1-8-0 a cwt., has resulted in larger imports of the latter. While the Indian imports of flour for 1933-34 were 81 tons, they amounted to 168 and 367 tons in 1934-35 and 1935-36 respectively. Originally, a difference of 8 annas per unit was maintained between the two duties because of their specific nature, and due to the reason that a certain quantity of flour fetches more price than a similar amount of wheat. The allowing

of rebate on the exports of flour, and the reduction and equalization of the duties on the imports of wheat and flour combined with the adverse freight policy of the N.W.R. with reference to the transit of flour, have given rise to many protests in India. Some people have asserted that the Government policy is not in the best interest of the country.

Exports have fallen off notwithstanding the fact that, for the European market, Indian wheat is harvested at a very opportune time. It reaches there in May, June, and July, when other exporters have usually depleted their stocks, and new wheat is not yet available (except, at times, from the U.S.A.). This gap had to be filled in the past; and, as flour mills did not like storing wheat over long periods, they imported it from India during those intervals. But the importers in England complained that the supply or the exportable margin of Indian wheat was never sure, and that they could not depend upon her for large quantities.¹ Later on the rapid development of the Elevator Systems and the Grain Pools in the newer countries enabled them to keep their produce in storage from year to year, and to sell to the European consumers regular amounts irrespective of the season, thus obviating the necessity of the latter turning to India for interim supplies. The reduced exports are, again, due to increased consumption at home. On account of figures of stocks of wheat not being available, and because statistics of agricultural production are always estimates rather than actuals, it is not possible to say exactly how much grain is consumed in India. But, on the basis of the balance of crop each year (i.e. production plus imports minus exports), a trend can be proved. It has been calculated that in 1920-21 the annual consumption of wheat in India was 8·375 million tons, and that, rising steadily, it reached 9·532 millions in 1934-35. This shows an increase of 1·157 million tons, or of 14 per cent over fourteen years.² It is in accord with the increase in population.

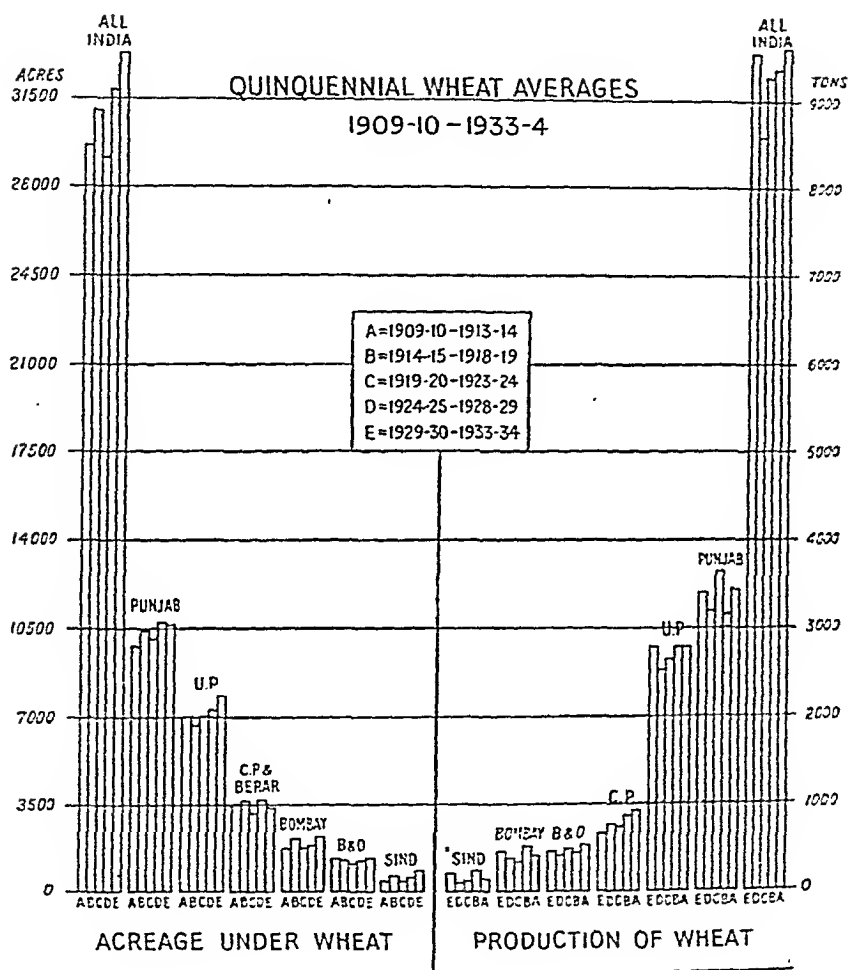
Indian exports of wheat have, from time to time, shot upwards

¹ Vide *Agriculture Commission, Evidence*, vol. x, p. 258.

² *Proceedings of the Wheat Conference* (Indian), 1934, Statement ix.

through a succession of good crops in the country, and high prices in European markets. Nevertheless, there are distinct signs that in the future she will more often than not play a minor rôle in the world markets. Even in 1904-05, and during the period for the pre-War average, after exceptionally good crops, India's record exports were exceeded by those of half-a-dozen other countries. The development of Indian industries and the rise in wages have, to a certain degree, made the urban population more wheat-eating, and the continuation of these factors gives similar indications for the future. Wheat is a superior food to rice and millets, and the extension of its consumption is therefore desirable. No doubt, possibilities of expansion in the area under wheat and of improvements in the yield exist, but it should be borne in mind that the consumption per head in India is still very low. With a change in purchasing power, a large section of her people not only changes the quality of their diet, but the quantity also. At present they are permanently in a state of malnutrition. It is not difficult to visualize, under these circumstances, a great increase in the local demand for wheat, thus leaving very little for export. Further, owing to the still larger world production and a definite reduction in Europe and America in the *per capita* wheat consumption, it seems improbable that its prices in foreign markets would rise for many years, except in abnormal seasons, to make exports of Indian wheat profitable. Taking all these facts into consideration, there is a great doubt if India will ever again become an important exporter of wheat.

So far as the periodical averages are concerned, a continuous rise in acreage is noticeable, except for the post-War period. In 1918 and 1919 the unfavourable character of the season and the prevalence of influenza at sowing times, and in 1920-21 drought and hot winds, caused a great drop in the area under wheat. Turning to the output, however, we are surprised to find that after all these years, and despite over 11 per cent more land under wheat, the total average produce for 1929-30 to 1933-34 was estimated to be actually less than that of 1909-10 to 1913-14. This is a typical example of the helplessness of agriculture, and



Estimated Production of Wheat in India (1909-10 to 1933-34)*

(in thousands)

Provinces	Pre-War Average 1909-10 to 1913-14		War Average, 1914-15 to 1918-19		Post-War Average 1919-20 to 1923-24		Pre-Depression Average, 1924-25 to 1928-29		Depression Average, 1929-30 to 1933-34	
	Acres	Tons	Acres	Tons	Acres	Tons	Acres	Tons	Acres	Tons
Punjab†	9,809	3,424	10,428	3,141	10,125	3,639	10,767	3,196	10,715	3,404
United Provinces†	7,040	2,817	6,671	2,799	6,980	2,662	7,220	2,434	7,852	2,803
Bihar and Orissa§	1,302||	560||	1,203	476	1,173	496	1,187	461	1,218	481
Central Provinces and Berar¶ ..	3,525	924	3,578	881	3,003	767	3,596	787	3,390	671
Bombay** ..	1,759	454	2,093	522	1,737	359	1,791	384	2,213	447
Sind†† ..	480	153	591	230	455	118	436	90	803	211
Total: All India	29,666	9,566	31,009	9,328	29,194	9,258	31,544	8,584	33,337	9,522

* Sources: Annual Estimates of Area and Yield of Principal Crops in India. Season and Crop Reports of the

Bombay Presidency.

† Including Indian States.

‡ Including the State of Rampur from 1920-21 onwards.

§ Excluding the Orissa and Chota Nagpur Feudatory States from 1918-19 onwards.

|| Average of 1910-11 to 1913-14 only.

¶ Including some Indian States up to and all States after 1924-25.

** Including Indian States.

†† Including Indian States up to 1916-17 only.

Estimates for these were incomplete in 1930-31.

the explanation again lies with seasons and elements rather than in the lack of effort. The production during the first average period was distinctly good—comprising three harvests of about 10 million tons each, and two of about $9\frac{1}{2}$ and $8\frac{1}{2}$ respectively. The second period was mainly fair—with three harvests above 10 million each, one about $8\frac{1}{2}$, and one of $7\frac{1}{2}$. The third was similar to the second period—with one above 10, 2 about 10 each, one above $9\frac{1}{2}$, and one less than 7. The fourth period may be called, on the whole, poor—with two about 9 each, two about $8\frac{1}{2}$ each, and one less than 8. The last quinquennium should be termed mediocre—with one about $10\frac{1}{2}$, one about $9\frac{1}{2}$, two above 9 each, and one of 9. According to the third forecast of April 1934, however, the all-India production for 1933-34 was estimated at 9.9 million tons, and, after allowing for seed reserves, 9.449 millions were expected to be available for consumption during the year. There was an opening stock of 0.723, and as progressive annual consumption for 1933-34 was calculated to be 9.532, the progressive accumulated stocks at the close of the financial year (with 1920-21 as base) was likely to be 0.640 million tons.¹ We conclude, therefore, that the present acreage under wheat should be ample for home requirements.

But the extension of wheat cultivation in Sind, subsequent to the opening of the Sukkur Barrage, should also be taken into account. In 1919-20 the area under wheat was 564,513 acres, while the estimate for 1933-34 was 1.306 million acres: the output for the corresponding periods was 155,812 and 303,249 tons respectively. (In 1934-35, however, there was some contraction both in the area and the output.) The Barrage and Canal systems started working in 1932, and in the following crop year the area under wheat and the production as well were more than doubled. Though this progress was maintained in the next season too, that is in 1933-34, steadiness has not yet been imparted to new cultivation in that province owing mainly to the unstable world economic conditions. Nevertheless, according to Sir Arnold Musto (who was the Superintending Engineer during the con-

¹ Vide *Proceedings of the Wheat Conference*.

struction stages), the project figures for the cultivation of wheat, when the area is fully developed after thirty years (i.e. in 1962), will be 2,541,000 acres.¹ An additional produce of half a million tons is consequently anticipated.² In the period between 1913-14 to 1922-23 a distinct upward trend was present, on the whole, in the British Indian wheat acreage: the figures for the two years were 22,685,000 and 24,408,000 acres respectively. But, in the following decade, the area was more or less constant, being

*Wheat Production in India in 1934-35**
(in thousands)

Provinces	Acres	Tons
Punjab	10,453	3,498
United Provinces ..	7,671	2,554
Bihar and Orissa ..	1,197	505
Central Provinces ..	3,713	781
Bombay	2,219	434
Sind	1,165	272
Total All-India ..	34,491	9,725

* The footnotes on page 185, *supra*, apply to this table as well.

24,294,000 acres in 1923-24 and 25,014,000 in 1932-33: the biggest reduction—of 0·87 million acres—took place in 1925-26, and the largest increase—of 0·53 million acres—in 1931-32, but no permanent tendency appeared in either direction. The wheat area in British India, thus, seems to have become stabilized at about 25 million acres; but it has steadily increased in the Indian States, from 7·0 millions in 1923-24 to 9·0 in 1934-35. The 1933-34 estimates gave the wheat acreage of British India as 27·3 millions, with a total of 36·0 millions for all-India. But the area again diminished in the succeeding year, and it is yet to be seen if, apart from the would-be addition in Sind, the next decade

¹ *Journal of the East India Association*, January 1935.

² *Proceedings of the Wheat Conference*.

will sustain an increased acreage. Notwithstanding the reduced area in 1934-35, the total production of wheat was larger than in 1933-34, when the all-India output had been 9,424,000 tons. As against the possibility of profuse harvests, allowance has to be made for the recurring failures of monsoons and the lower yields thereby. The effects of the growth of population and of dietary changes by those not at present consuming wheat should

*Wheat Trade between the Punjab and Karachi**
(in maunds)

	1920-21	1933-34	1934-35
Wheat imported into Karachi from the Punjab..	11,851,044	2,252,095	2,014,686
Flour	—	62,184	144,355
Total wheat exported from the Punjab	24,414,344	5,271,166	8,849,842
Flour	—	1,970,496	2,580,413
Total wheat imported into Karachi	13,437,171	6,321,570	8,880,448
Flour	—	123,469	234,698

* Vide "Rail and River-borne Statistics of India."

also be taken into consideration. Hence, after weighing the pros and cons, it appears that even if our exports do not improve, we will not have an over-production of wheat within the next decade or so.

The Indian, as well as the world, wheat situation affects the Punjab more than any other part of the country. The peak year was reached in 1928-29, when she had 10 million acres under wheat; but, afterwards, she started reducing the area with the effect that in 1932-33 it came down to 8.6. In 1933-34, however, it again increased to 9.8 millions. In 1920-21 she sent 11,851,044 maunds to Karachi: but in 1934-35 she sent only 2,014,686 maunds of wheat, and 144,355 of flour.

Owing to the unfortunate discontinuance of "Rail and River-borne Statistics of India" in 1922, yearly figures could not be obtained till April 1933, when they were resumed again. The ending of Indian exports and the greater production in Sind, have

resulted in large surpluses of wheat in the Punjab, although she is now selling larger quantities to the United Provinces, Rajputana, Central Provinces, Bihar and Orissa, and Bengal.¹ But these provinces are not happy at buying from the Punjab, and want to grow their requirements themselves. The United Provinces normally consume what they produce: but they also export small surpluses to Bihar and Orissa and Bengal, and import similar quantities from the Punjab. Bihar, on the other hand, does not grow enough for its needs, and imports considerable amounts from the provinces to her west, passing on some to Bengal in the process. The last-named is a deficit province in the matter of the production of wheat, and is dependent on the imports from the three provinces mentioned above.

Thus the position of the wheat exporting provinces is that foreign exports have stopped, and within the country attempts are being made to grow more wheat. In many parts it does not form the staple food. In some regions, because the conditions were not favourable for the cultivation of wheat, rice has become the main diet of the people. In other places, although wheat is produced, it is regarded as the aristocratic cereal, fit for well-to-do persons only; therefore the masses live on coarse grains, and try to sell off the whole crop of wheat. It is among these people that a dietary reform and improvements should be introduced. And the only course open to the surplus provinces, mainly the Punjab, is to increase the consumption of wheat at home and to start a publicity campaign in other regions. The adoption of this suggestion will inevitably mean reduced demand for other foodstuffs, and is bound to lead to the throwing out of millets and rice. A difficult situation will, then, be created: an attempt will be made, at a later stage, however, to indicate some way out.²

B. RICE

Any suggestion involving greater consumption of wheat *ipso facto* encroaches upon the preserves of rice. As formerly stated,

¹ *Proceedings of the Wheat Conference.*

² See pp. 309-10, *infra*.

most parts of India are non-wheat eating, and even in Northern India—with the exception of the Punjab, Delhi, and western United Provinces—rice enters largely in the daily food of the people. The peak year in the all-India production was reached in 1931-32, when the total acreage was 84,374,000, and the output 33 million tons; but it declined in subsequent years, being 82,882,000 acres and 31·1 million tons in 1932-33, 83,042,000 acres and 30·8 million tons in 1933-34, and 81,869,000 acres and 30·1 millions in 1934-35. The main causes for the decrease during the latter two years were that in the important growing regions, barring Burma, less land was sown with rice on account of the fall in prices; consequently there was a substantial diminution in the output too. Insufficient rainfall and generally unfavourable seasons also contributed to the poor crops. Bengal, as the greatest rice-producing province (on an average of the latest ten years about 20 million acres and 8½ million tons), is responsible for more than a quarter of India's total. Though the area under rice in Madras is smaller than that of Bihar and Orissa or Burma, it normally produces more than either of the two. The United Provinces usually rank next, closely followed by the Central Provinces.

Although the total amount of rice produced in India (excluding Burma) amounts to more than one-third of the production of the entire world, yet her exports are negligible. There is inter-provincial trade, but it does not represent surpluses. India proper is a deficit country in this respect, and imports largely from Burma. It is the latter province that enters the international trade in rice, and occupies the proud position of being the world's biggest exporter. The extent to which the all-India exports of rice comprise the contributions from the mainland, and those from Burma will be realized from the figures given on page 192. The total exports from India, in 1931-32, created a record; but, later on, owing to the slackening of foreign demand, they have fallen off.

The time is opportune now for Northern India permanently to cut down the cultivation of rice. It has already been curtailed to

*Production of Rice in India**
(in thousands)

Provinces	Area (acres)				Production (tons)			
	1931-32	1932-33	1933-34	1934-35	1931-32	1932-33	1933-34	1934-35
Bengal	22,129	21,779	21,672	20,740	9,493	9,364	8,680	8,273
Bihar and Orissa ..	14,091	13,072	13,229	13,734	5,738	4,201	4,294	4,688
Burma	12,517	12,702	12,919	12,666	4,202	4,913	5,174	4,533
Madras	11,538	11,534	11,704	11,056	5,385	5,406	5,314	4,981
United Provinces ..	6,555	6,140	5,980	6,437	1,989	1,327	1,736	1,937
Total: All-India..	84,374	82,882	83,042	81,869	33,001	31,114	30,864	30,137

* Source: Estimates of Area and Yield, 1934-35.

a certain degree, and the land so withdrawn has been put under other crops, primarily cane. What is needed is to convince the *ryot* of the superiority of wheat as a staple of food, and to persuade him to make it his principal diet and, also, not to revert to the greater sowing of rice. If official and non-official influences are exercised to keep the rice area low, increased consumption of wheat could take place. As it would involve the introduction of changes in the diet of the people, the purpose cannot be accom-

*Exports of Rice from India**
(in tons)

From	1931-32	1932-33	1933-34	1934-35
Burma ..	2,133,735	1,656,992	1,526,689	1,399,218
All-India ..	2,371,779	1,887,132	1,744,024	1,606,765

* Vide Accounts relating to the Sea-borne Trade and Navigation of British India.

plished without propaganda. By these means, the existing stocks of wheat, and even the larger supplies expected in the future, could be automatically used up. Such a policy cannot be interpreted as discrimination against Burma because no legislative or fiscal measure would be passed to handicap her. It would be dictated by sheer necessity, and by a desire for a purely internal reform. Improvement in the diet of the Indian people and the obvious advantages of growing a crop that is more paying are sufficient justifications for the adoption of this course. As will be seen presently, the Government and the citizens of Bengal have been trying to reduce the area under jute on the ground that the prices have gone down, and that in order to relieve prices the supply should follow suit. A similar effort is advisable in the case of rice also.

C. SUGAR-CANE

Sugar-cane is different from other agricultural crops in a number of ways. It gives the *ryot* employment the whole year round,

particularly during the gap between the *kharif* and *rabi* harvests, as the cutting operations stretch from November to March. Being one of the principal cash crops of India, it is expected to yield a larger profit. Cane is regarded as a good rotation crop; under improved methods of cultivation, not only its own output can be increased, but that of the rotation crops also can be rendered higher. Its tops and leaves provide good fodder for cattle. Further, cane, probably, is the only agricultural product (excluding garden or dairy produce) by storing which one stands to lose instead of gaining. It must be supplied fresh to the sugar manufacturer, as the quantity of sucrose present in the cane tends to decrease rapidly as it starts drying up.

India is the second largest grower of cane in the world, yet till 1931 she was one of the greatest importers of sugar. Up to the middle of the last century, Indian exports of sugar had reached Europe regularly, but afterwards they ceased, and she came into the front line of importers. Cane having been pressed, its juice is treated in three ways to provide the edible product. The most crude process—but still very widespread in the United Provinces (the leading province in sugar industry) and other parts of the country—is that of boiling down the juice in locally made open pans, to form consolidated molasses, called *gur* (or *jaggery* in South India). The method is primitive, allows of little refining, and is wasteful as the percentage of sugar extraction by bullock-power is about 5 only. In some regions of India, notably in the Rohilkhand Division of the United Provinces, a modification of the above indigenous system has taken place. The cane is still generally crushed by bullock-driven iron rollers, and the juice boiled in open pans. But big furnaces provide the heat, a certain amount of hand-skimming is done, and some chemicals are used for clarification. After the stirring and cooling processes have been carried out, the produce in the form of small-crystallized light brown sugar is ready for sale. This product is called *khand*, hence the name *khandsari* for the industry. The third system is to make white-grained sugar in vacuum pans in modern factories. Under this, in India, the extent of sugar extraction from the cane was

8.80 per cent in 1933-34 and 8.66 in 1934-5, while in the Java factories it was 12.64 and 12.35 respectively.¹ The majority of the mills manufacture sugar direct from cane, getting about 9 maunds of sugar from 100 maunds of cane, but some make sugar from *gur*. The latter method involves waste, as 100 maunds of cane yields 10 maunds of *gur*, which can give at the best

*Production of Cane in India**
(in thousands)

Provinces	Area (acres)		Yield, <i>gur</i> (tons)	
	1933-34	1934-35	1933-34	1934-35
United Provinces ..	1,713	1,813	2,532	2,719
Bihar and Orissa ..	418	445	623	673
Madras	122	125	349	351
Bombay	73	75	201	184
Bengal	257	276	457	492
Punjab	466	462	364	326
Indian States ..	146	167	227	257
Total All-India ..	3,311	3,478	4,896	5,134

* Source: *Estimates of Area and Yield*, op. cit., 1934-35.

6 maunds of white sugar. This shows the extent of the loss that is suffered owing to persistence in backward methods of manufacture. Above we give the figures of the production of sugar-cane in the various provinces of India. The United Provinces rank first, whilst Bihar and Orissa occupies second place in the yield of *gur*, although the Punjab has larger area under cane. Other parts are of small importance. In 1933-34 the all-India gross output was 4,896,000 tons of *gur* (not cane), which, if converted at the above ratio, amounts to a total of 48,960,000 tons of cane. Of this—according to the actuals—only 5,157,373 tons (a little over 10 per cent of the total) were crushed in the modern factories, and the rest were used as sets for planting, chewed in raw state,

¹ Vide *The Indian Trade Journal*, October 24, 1935, p. 340.

and made into *khand* and *gur*. And, similarly, in 1934-35—according to the estimates—about 12·5 per cent of the total cane grown was utilized in modern sugar mills. Dividing the entire produce of cane by the acreage under the same, we get the yield per acre which, both in 1933-34 and 1934-35, thus resulted in under 15·0 tons as compared with 40 to 50 tons in Java. These factors—the small yield per acre, the low amount of extraction, and the production of *gur* on such an extensive scale—have been responsible for retarding the growth of the Indian sugar industry. On page 196 are given the details about the factories working with cane.

In 1919-20 the Indian Sugar Committee went at length into the agricultural and industrial aspects of sugar. The relatively poor condition and yield of Indian cane was pointed out, as well as the defects and the wastes involved in manufacturing *gur* and brown sugar. Among the many useful suggestions were those recommending that steps should be taken to counteract the advantages that the bounty-fed sugar imports from abroad enjoyed in the Indian market. They favoured the setting up of an Imperial Sugar Research Institute; and advocated the opening of a Sugar School for India to form an integral part of the Research Institute.¹ No immediate action was taken by the Government of India, but, subsequent to the creation of the Imperial Council of Agricultural Research in 1929, rapid developments have taken place in India. Cane-breeding is carried on at Coimbatore in South India, and research stations have been started at different places in all the provinces in Northern India, as well as in Bombay and Madras. In October 1936 the Government of India took over the sugar section of Harcourt Butler Technological Institute, Cawnpore, and are now managing it separately under the name of Imperial Institute of Sugar Technology: ultimately it is to be developed into an all-India institution. The most important event in the history of sugar industry in India took place in 1931, when, upon the recommendation of the Tariff Board, the revenue import duty was raised to Rs. 7-4-0 a cwt. Next year, the Sugar Industry Protection Bill was passed, granting protection for a

¹ Vide *Report*, 1921, p. 404.

*Production of Cane Sugar in India**
(Cane and sugar in tons)

Province	Number of Factories		Cane Crushed		Sugar made		Percentage of Total Production
	1933-34 Actuals	1934-35 Actuals	1933-34 Actuals	1934-35 Estimates	1933-34 Actuals	1934-35 Estimates	
United Provinces†	60	65	2,967,623	3,345,000	269,629	294,800	50.8
Bihar and Orissa	33	34	1,682,781	2,049,000	139,957	190,800	32.9
Madras†	4	8	89,247	208,000	7,702	19,000	3.3
Bombay†	5§	5	113,157	228,000	11,658	23,600	4.1
Burma	1	2	64,509	142,000	5,685	12,700	2.2
Bengal	2	5	76,655	137,000	5,907	10,800	1.9
Punjab†	6	6	46,901	97,000	3,395	6,000	1.0
Indian States	1	5	116,500	244,000	10,032	22,300	3.8
Total	112	130	5,157,373	6,450,000	453,965	580,000	100
Adds	3	12					

* Sources: *The Indian Trade Journal*, April 4, 1935, and October 10, 1935.

† Excludes Indian States.

‡ Includes Sind.

§ Out of the 115 factories which worked in 1933-34 only 112 are included in this table as 3 factories did not send returns. In 1934-35, 12 factories either did not work or failed to submit returns.

total period of fifteen years, at the rate of Rs. 7-4-0 a cwt. for the first seven years (ending March 31, 1938): the latter basis for protection is to be settled after an enquiry. During the currency of the financial year 1931-32 a Supplementary Budget, introducing heavy additions to taxes, was presented by the Government of India. A general surcharge of 25 per cent was also imposed on most of the existing duties: thus, the total import duty on sugar reached Rs. 9-1-0 a cwt., and there it has remained since then.

The progress of the sugar industry, following upon the grant of protection which eventually amounted to more than that recommended by the Tariff Board, was very rapid; and, in July 1933, a Conference of the Provincial Ministers and representatives of the cane-growers and manufacturers of sugar was convened by the Central Government to take stock of the situation. Discussions disclosed that, while the manufacturers were enjoying large profits, the cultivators were not getting their due share. The Government of India ultimately stepped in and claimed a part of the gain in order to compensate itself for the decrease in the customs revenues—a direct result of the greatly reduced imports of sugar. It pointed out that the Tariff Board had actually recommended an initial protective duty of Rs. 7-4-0 a cwt., with an addition of 8 annas per cwt. “should market prices in Calcutta in the future fall below Rs. 4 (without duty). . . .”¹ The deferred duty would, in the normal course, have been imposed as the price of sugar had fallen below the level fixed; but because of the surcharge of Rs. 1-13-0, that contingency did not arise. Therefore the industry was found to be deriving an extra benefit to the extent of Rs. 1-5-0 per cwt. Hence the Sugar Excise Act was passed levying an excise duty (i) on *khandsari* sugar at the rate of 10 annas per cwt., (ii) on all other sugar, except palmyra sugar, at the rate of Rs. 1-5-0 per cwt., to be paid in the first instance by the factory. Allowing for the excise duty, the industry now receives protection to the extent of Rs. 7-12-0 per cwt.

A consequence of this Act was another, the Sugar-cane Act of 1934. The Tariff Board Enquiry, in fixing the protective duty at

¹ *Report on Sugar Industry*, 1931, p. 80.

Rs. 7-4-0 for the first seven years, regarded Rs. 8-9-1 per maund "as the basic fair selling-price for Indian sugar during the period of protection."¹ In calculating this figure, they had taken the price of cane as 8 annas per maund, although it was expected that by the end of the fifteen years' protection ". . . improvements in methods of cultivation and in the variety of cane might result in a reduction in the costs of cultivation by 2 annas a maund."² But in actual working it was found that the prices paid by the factories for the cane supplied to them were, generally, between 4 and 5 annas, while the price of sugar varied between Rs. 9 and Rs. 10 till after 1932. Moreover, on account of the contractors serving as middlemen, the whole price never reached the peasants, who thus suffered double loss. The Tariff Board had favoured protection for the sugar industry because of ". . . the importance of cane cultivation in the agricultural economy of India . . ."³ the term sugar industry being intended to include the growers of cane as well as the manufacturers of all kinds of sugar (raw, brown, and white). Further, the subjection of the Indian sugar industry to the excise in 1934 necessitated the safeguarding of the interests of the *ryot* all the more, lest the manufacturers tried to recoup themselves at the producers' expense. The Sugar-cane Act enables the Provincial Governments to declare, by notifications, any specified area as controlled area in order to apply schemes for enforcing a minimum price for cane to be paid by the factory to the growers.

The whole of the United Provinces and north Bihar have accordingly been declared controlled areas by their Governments. With effect from December 1, 1934, the United Provinces Government have enforced the rules that they had framed in virtue of the power vested in them by the Act.^{4, 5} The minimum price was fixed at 5 annas. It was not fixed higher because the general price-

¹ *Report*, p. 69.

² *Ibid.*, p. 68.

³ Resolution, No. 127-T. (29), Department of Commerce, Government of India, New Delhi, January 30, 1932.

⁴ Communique of the Industries Department, United Provinces, dated October 25, 1934.

⁵ United Provinces Sugar-cane Rules, 1934, Section 7-(3).

level had fallen since the Report of the Tariff Board; and on account of the rather sudden increase in their supply, the market for molasses had got dislocated, and they hardly fetched anything. Fortnightly prices are now notified in the *Provincial Gazette*. The rules further provide that no unauthorized deductions should be made, not even to cover transport charges from the purchasing centres to the factories. The underlying idea is that expenses of cartage up to these places should be borne by the growers, and after that by the manufacturers. The latter are free to reject damaged or inferior cane, but if they buy it they should pay the minimum price: there is nothing to stop them, however, from paying premium for better quality, for late-in-the-season supplies, etc.

The factories have been made responsible for seeing that prompt payment is made to the cultivators themselves, or to their authorized representatives, and that the money actually reaches those persons. This object is achieved by a system of licensing contractors and middlemen, thereby making it obligatory upon the various factories to get the names of their purchasing agents approved by and registered with the District Magistrates, and to maintain with themselves deposits or securities of Rs. 1,000 each from such agents. Factories, not buying from the growers and not coming into direct contact with them, ordinarily engage the services of some men to go round and collect cane, in which case the employees get their wages from the sugar-mills. The latter make arrangements with some middlemen—called contractors in this trade—also, but on commission basis. These agents work, essentially, for the factories, and deal with the cultivators on their behalf. So each management is expected to know its agents, and to be in a position to vouch for their integrity. As it is laid down by the rules that a sugar factory shall not purchase cane except from the growers, co-operative societies, and licensed purchasing agents, the chances of unauthorized persons buying cane from the cultivators at a low price and selling it to the mills at official price, thus clearing large profits in the deals, are reduced to the minimum. Provision for correct weighing and keeping of certain

registers has also been made in the rules, and penalties for the breach of regulations laid down. Similar steps have been taken in north Bihar, the home of the sugar industry in the province of Bihar and Orissa.

Considered in its entirety, the scheme has worked well in the United Provinces; and on enquiries from the village revenue officials who are entrusted with the task of informing the factories and cultivators about the changes in notified prices, and who report periodically the actual rates at which cane was purchased within their jurisdiction, it has been found that the prices have varied between 5 and 6½ annas during the first year's working (December 1934 to December 1935). Certain defects, however, are to be noticed. For example, when the crushing season starts in November the stocks of sugar are prone to be low and the prices high. This automatically tends to increase the minimum price for cane—for the first and second fortnights of November 1935, the price in the United Provinces has been 5½ annas per maund—and the growers, realizing that as the season advances the price could come down, may be induced to cut their cane in an immature condition. As the sugar content of such cane will be low, the factories will be placed at a disadvantage; and since the yield of immature cane per acre will be less than when full maturity has been reached, the growers also will stand to lose. This difficulty can be overcome either by prohibiting the sugar factories from starting operations before the month of December each year or by introducing broadcast early and late ripening varieties. Great measure of success has already been achieved by the Provincial Agriculture Department in popularizing improved cane; but an intensive propaganda in favour of balanced cultivation of superior strains maturing at varying intervals is desirable in the best interests of the industry.

Another point deserving attention is that, under the United Provinces Sugar-cane Rules, the basis of the sliding scale for payments for cane is the prevailing price for sugar; thus the quality of the cane is not taken into consideration. Although it is hoped that the factories would pay a better price for cane with

higher sucrose content, it is very doubtful if they really do so. It is more probable that they purchase all the produce at the same price. As the Government deemed it necessary to fix minimum prices to save the growers from being exploited, it is but logical that arrangements should also be made to ensure payments according to quality. Louisiana and Cuba base their payments for cane on both the factors, and the same method was recommended for India fifteen years back.¹ The costs of production and the sugar contents of, and the resulting gains to manufacturers from, three or four most common types of canes should be worked out, and popular names given to these classes of cane. After a definite ratio has been established between them by the sugar authorities in India, the minimum prices could also be made to conform to those grades of cane, so that instead of one price being notified as at present, three or four prices for as many classes (to be mentioned by name) should be declared. The manufacturers are already required to put up notices at purchasing centres showing the prevailing rates; therefore in the future, seeing the various canes mentioned in the list, the growers would know the prices fixed for their quality. Disputes as regards the placing of the cane under different categories will, no doubt, arise, and arbitration may have to be undertaken. The most useful course for the growers, however, is to form Co-operative Sale Societies so that the marketing of cane could be smoothly and cheaply arranged. The active collaboration of the sugar-mills in these matters is essential: by co-operating with the Agriculture Department they would be helping the improvement of the supply which is ultimately bound to react in their favour; and by dealing sympathetically with the *ryot* and by winning his confidence they would be assured of their raw material, and could persuade him to join them in making the industry more efficient.

Since the grant of protection the sugar industry has undergone phenomenal development. The distribution of factories over the different parts of the country has been mentioned previously: here the Indian production will be dealt with as a whole, with a

¹ Vide *Report of the Indian Sugar Committee*, pp. 305-309.

view to examining the situation as it is and as it would be in the near future.

A few interesting facts stand out in these figures. Firstly, whatever gigantic strides were taken in 1932 and 1933 in the establishment of factories are not to be repeated. Instead, it appears that an era of consultations, deliberations, organization of factors of production and consolidation of the present position has set in:

*Progress of the Sugar Industry in India**
(in tons)

Years	Number of Factories	Sugar Manufactured from Cane	Sugar refined from <i>gur</i>	<i>Khandhari</i> sugar (estimates)	Total
1929-30	27	89,768	21,150	200,000	310,918
1930-31	29	119,859	31,791	200,000	351,650
1931-32	32	158,581	69,539	250,000	478,120
1932-33	57	290,177	80,106	275,000	645,283
1933-34	115	453,965	61,094	200,000	715,059
1934-35	{ 130 12 }	578,115	40,000	150,000	768,115

* Sources: (a) *Indian Trade Journal*, Sugar Supplement, August 15, 1935; (b) *Indian Trade Journal*, October 24, 1935; (c) *Indian Year Book*, 1935-36; (d) "The Indian Sugar Industry," by B. C. Burt, *Journal of the Royal Society of Arts*, August 16, 1935.

the latest statistics confirm this view. In like manner it is expected that "1935-36 will see about 145 modern factories in operation, with an estimated combined capacity of 810,000 tons of sugar per annum—a quantity which approaches very closely to India's total requirements of factory sugar."¹ So far so good. From an importing country—as recently as 1929-30 she imported 939,600 tons, excluding molasses—and within five years of the levying of the protective duty she to-day supplies most of the home requirements, which is very gratifying. The various features of the table above, viz. decrease in the quantities of sugar refined from *gur* and of *khand*, show that the industry is proceeding on right lines.

¹ Vide Burt, op. cit.

Nevertheless, the rapid expansion in the manufacture of vacuum-pan white sugar may easily give rise to apprehensions regarding possible over-production even before the first period of protection expires in 1938. The United Provinces and Bihar dominate the field at present, but the Punjab, Bombay, Bengal, and Madras, and Indian States like Hyderabad and Mysore, are naturally trying to develop the industry and are putting more acres under cane. Moreover, as efforts to increase the quality and yield of cane succeed, and as the factories get more efficient in their work, there are reasons to believe that production will increase very largely.

On the other hand, however, one has to bear in mind that India is still importing appreciable amounts of sugar from abroad: her total imports, in 1934-35, were 223,347 tons. To that extent the sugar-mills—by improving the quality of their produce, by studying the demand and by catering for the diverse tastes of the people—are assured of an additional market. Further, as brown and raw sugar industries are declining, factory-made sugar will be consumed by a larger section of the population than hitherto. These factors, considered in conjunction with the registration of a few new enterprises only during the last two years, and the consequent small additions to the annual production of white sugar, lead one to conclude that there is little danger of the Indian mill-made sugar exceeding home requirements in the near future. Then it should be remembered that the existing *per capita* consumption of white sugar in India is one of the lowest in the world, being about 20 lb.;² while in the United States 103·4 lb. of sugar were available per head in 1932.² Therefore one possibility of absorbing the future supply will be to encourage greater use of factory sugar in the country. Lower costs of cultivation per unit of area, economies in the expenses of manufacturing sugar, and the marketing and sales organizations should reduce the prices and enable many more millions to substitute it for

¹ Vide *The Indian Sugar Conference* (Dr. Gokul Chand Narang, Minister, Punjab), July 1933.

² Vide *United States Statistical Abstract for 1932*.

gur and *khand*. It has been shown previously that the last two involve wastes, and should, consequently, make way for better methods of utilizing. Manufacturing costs can also be brought down if power alcohol is made from molasses, which are worth practically nothing these days. Mixed with petrol, in certain proportions, it can be used as motor fuel. India imports all the petrol she consumes, and pays a high price for it. By making spirit she will cheapen the motor fuel and increase its consumption. Extraction of spirit from potatoes and its use with petrol has been officially sponsored in various European countries, and the Government of India will do well to copy their example. The competitive strength of the sugar industry will grow thereby, and India may, in course of time, again become an exporter of sugar.

D. OILSEEDS

Oilseeds, using the term in a collective sense, cover an immense area, and are grown all over India. The crops are more or less precarious by nature, and the oilseeds are subject to great fluctuations. Nevertheless, on account of their importance both as food and industrial crops, owing to the occasional convenience of sowing oilseeds mixed with other crops (*viz.* in the United Provinces with wheat and gram), and the consequent saving in cultivation expenses, and sometimes (*e.g.* in the case of groundnuts) because of their value as rotation crops—for reasons more than one—a large variety of oilseeds is produced. They include linseed, rape and mustard, sesamum, castor, groundnut, and, of course, cotton seed.

Northern India is prominent in the cultivation of the first three, and the Central and the Southern parts lead in the rest.

Although cultivated extensively, RAPE and MUSTARD and SESAMUM are mostly consumed locally, and a small portion only is normally exported, but the exports of oils are more substantial. A much greater proportion of CASTOR, however, is exported. "The supply is practically an Indian monopoly, and the oil has proved to be a high-grade lubricant, of special value for certain

types of aero-engines."¹ Possibilities exist, therefore, if properly handled and organized, of the popularity of Indian castor increasing. The dangers in any monopolistic situation are that it may dull the initiative, take away the push, and lead to a policy of drift. The entrepreneurs are, in such cases, usually content with the current profits, and take no steps to develop new uses and outlets

*Out-turn of Oilseeds in India in 1934-35**
(in 000 tons)

Provinces	Linseed	Rape and Mustard	Sesamum	Castor	Ground-nut
Bengal	27	180	35	—	—
Bihar and Orissa ..	93	137	30	8	—
United Provinces ..	39 (100)	30 (357)	22 (71)	2	—
Punjab	3	101	8	—	—
Bombay (ex Sind)	11	—	17	4	389
Central Provinces ..	87	17	23	7	38
Madras	—	—	79	23	920
Total All-India ..	418	900	408	106	1,896

* Source: *Estimates of Area and Yield, 1934-35*. Notes: (a) Crops grown in relatively small quantities have not been shown against the respective provinces; (b) Figures in brackets represent "mixed" crop, i.e. seed sown in the same field with other crops and are highly conjectural; hence they have been kept separate; (c) Amounts for cotton-seed are difficult to calculate and statistics are not available.

for their produce; while other countries being in constant need of an essential commodity, and themselves not producing it, carry on ceaseless efforts to attain that object, or to find some suitable, and may be cheaper, substitutes. The high cost of cultivating indigo in India and the export duty led German scientists to discover synthetic dyes, which resulted in the ruin of the Indian industry. Similar, if not so calamitous, has been the experience of the jute trade lately, as will presently be seen. Nevertheless, out of 68,749 tons of castor seed and 1,213,039 gallons of oil exported

¹ *The World Agricultural Situation, I.L.A., 1935, p. 305.*

from India in 1934-35, 20,213 tons and 612,381 gallons were taken by the United Kingdom, which nearly meets all her requirements. It should be pointed out that although the Indian Castor Oil is accorded preferential treatment in the British tariff (under the Ottawa Agreement), it has not benefited in practice. The monopolistic position and the superiority of the product contribute mainly towards its popularity. But we should not be satisfied with that. Attempts should be made through the Indian Trade Commissioners in Europe to increase our exports of castor to other countries.

*Exports of Oilseeds from India**

(000 tons)

Items	Pre-war Average	1931-32	1932-33	1933-34	1934-35
Linseed ..	379	120	72 (44)	379 (67)	238 (64)
Rapeseed ..	273	54	115 (226)	73 (263)	37 (295)
Groundnut	212	672	433 (917)	547 (716)	510 (275)
Castor	114	104	86 (1,125)	82 (1,335)	69 (1,213)
Cotton ..	240	12	2	6	0.6
Sesamum ..	119	12	10 (75)	15 (104)	4 (126)
Others ..	116	14	15 (57)	22 (430)	(200)
Total ..	1,453	988	733 (2,444)	1,124 (2,915)	874 (2,173)

* Source: (i) *Review of the Trade of India*; (ii) Accounts relating to Sea-borne Trade. Note: Amounts in parentheses are for the oil exported (000 gallons).

GROUNDNUT is of modern introduction in India, yet it has become one of the main crops, being grown most in the peninsular part. The exports in 1934-35 amounted to 510,153 tons of nut and 274,882 gallons of oil. In that year the exports of oil to the United Kingdom fell by over 400,000 gallons—previously she used to take 70 to 80 per cent of Indian exports—but her imports of Indian groundnuts increased in 1933 and 1934. Greater exports from Gambia and Nigeria have given Indian trade a setback. The comparative nearness to the consuming markets give these

countries an appreciable advantage. Lack of uniformity among the nuts supplied and malpractices, like wetting, were also responsible for the decline in India's trade; but the decorticated groundnut enjoys a good reputation in the British markets. Large imports of soya bean and cottonseed, however, are offering severe competition to Indian groundnut in Europe. Here, again, the Ottawa duties do not help India as the British Colonies, the chief rivals, also enjoy similar preference. After this review, it appears that the future of Indian groundnut lies in its being increasingly utilized within the country. A tendency against *ghee*¹ is noticeable among a growing section of the population: it is regarded as too greasy and rich for the human system. So vegetable oils containing groundnut oil, scientifically prepared and well refined, will find an expanding market awaiting them in this country. And if manufactured on a sufficiently big scale they may work out cheaper than genuine *ghee*. COTTONSEEDS are faring very badly in overseas markets and, after falling off for some time, the exports can be said to have reached vanishing-point. The abundant world supply and the large consignments from Egypt, the British East Africa, and Anglo-Egyptian Sudan to the United Kingdom have affected Indian cottonseed adversely. As a by-product, its outturn depends upon the extent of the cultivation of cotton; therefore any direct control of production is not possible. Greater use as food for cattle and fertilizer should be encouraged at home in order to find markets for the seeds.

LINSEED is grown in India mainly for export; and is sown for the sake of seed, and not for flax. In the pre-War days, India was the principal supplier to the whole world; but afterwards she began to lose ground—the most formidable rival being the Republic of Argentina. Under the Ottawa Agreement, the United Kingdom extended preferential treatment to Indian linseed and oil, which were to enter free, while non-Empire supplies were to

¹ The natural *ghee* (made from milk) should not be confused with the vegetable or other artificial products (made from margarine, whale-oil, etc.), imported from Germany and other parts of Europe, and generally sold in the Indian markets under the dubious title of vegetable *ghee*.

pay 10 and 15 per cent *ad valorem* duties respectively. With the imposition of general additional duties, the total import duty on linseed oil (including the 15 per cent Ottawa duty) in 1933 amounted to £3 10s. per ton. But the British exporters of linseed oil and goods manufactured therefrom were getting drawbacks to the extent of 15s. and £2 10s. per ton, if the respective material used in manufacture was imported linseed and linseed oil. In 1932-33 and 1933-34 Argentine crops were poor, and in 1933-34 and 1934-35 production in the United States was indifferent. Thus India exported 378,868 tons of linseed in 1933-34, out of which 176,425 tons went to the United Kingdom, and exceeded

*India's Exports of Linseed**
(in tons)

To	1932-33	1933-34	1934-35
United Kingdom	14,270	176,425	98,449
Total	72,190	378,868	238,365

* Source: *Accounts Relating to the Sea-borne Trade*, op. cit., March 1935.

her imports from Argentina by a long margin. The rise in exports to Great Britain in 1933-34 was acclaimed by the supporters of Imperial Preference in India as a direct result of the Agreement. That both the factors combined towards this end may not be easy to refute, but a few points should be specially noted in this connection. The export of Indian linseed to other countries (ex U.K.) also increased from 57,920 tons in 1932-33 to 202,443 in 1933-34, and was primarily due to the shortage of the world supply. Another element, disproving the value of the Agreement so far as linseed was concerned, was that owing to the drawbacks Indian produce was not being benefited to the full extent of the British preference duties.

By the next year, however, the Argentine harvest had righted

itself, and Indian seed began to feel the competition once more. Under the Import Duties Act of 1932, statutory provision had been "made for the allowance of drawback in certain circumstances on the exportation or shipment as stores of . . ."¹ Orders of Treasury were to be employed for the purpose: through them the drawbacks on imported linseed and oil were increased from 15s. to 18s., and from £2 10s. to £3 per ton respectively. The new rates came into operation from November 22, 1934, and were given retrospective effect so as to be applicable to imports on or after May 22, 1933. If the London wholesale prices² are taken as £10 and £25 2s. 6d. per ton for La Plata linseed and oil respectively, the drawbacks (at the existing specific basis of 18s. and £3 a ton) will be equivalent to 9 per cent *ad valorem* on the first, and a fraction less than 12 per cent on the second. The net preference to India thus amounts to 1 and 3 per cent only against 10 and 15 per cent stipulated at Ottawa.³ Let us now convert the *ad valorem* preferential import duties into specific ones, and compare them with the drawbacks. Even if we ignore the miscellaneous business expenses incurred in the handling of goods and the profits of the importers with above prices prevailing, non-Empire oilseed and oil imports pay duties (at the Ottawa preference rates) slightly over 18s. 2d. and £3 5s. 2d. per ton respectively. Drawbacks being fixed as they are, India, therefore, gets an actual preference of a little more than 2d. per ton on that portion of the seeds that is re-exported in the form of oil or manufactures, and 5s. 2d. on oil similarly re-exported; and she, exporting mostly linseed rather than oil, is more interested in the former, which, as far as re-exports are concerned, does not ultimately get any real encouragement in the British market. Prices naturally change, and the *ad valorem* duties introduce varying reactions; but this discussion is meant to show how, with reference to Indian linseed, Imperial Preference is operating in practice.

¹ Vide *Customs and Excise Tariff of the United Kingdom*, January 1935, p. 87.

² *The Economist*, November 30, 1935.

³ *Report of the Indian Delegation to the Imperial Conference*, Ottawa, 1932.

The cumulative effect of all these handicaps was that, in 1934-35, India exported only 98,449 tons of linseed to the United Kingdom—a diminution of 77,976 tons (or over 44 per cent) from the previous year—while the exports to other countries also decreased but to 139,916 tons only—a fall of approximately 30 per cent from the preceding year. Again, during the calendar year 1935 the United Kingdom imported from India 58,499 tons, and from Argentina 195,831 tons as compared with the respective 139,538 and 43,946 tons for the year ended December 31, 1934.¹

*Imports of Linseed into United Kingdom**
(in tons)

From	1932	1933	1934	1935
British India	9,217	131,182	139,538	58,499
Argentina	343,866	113,161	43,946	195,831
Other countries	9,233	4,238	544	2,974
Total	362,316	248,581	184,028	257,304

* Source: *Accounts relating to Trade and Navigation, United Kingdom.*

And the most unfortunate part about it is that neither the Indian Delegation to Ottawa nor the First and Second Year's Reports on the working of the preference have taken any cognizance of the existence of the drawbacks: no mention is made of them in any of the publications of the Government of India. The grant of preferential treatment to our linseed in the British markets was being cited as a great advantage to India, but owing to the generous drawbacks it has, for all practical purposes, never proved to be helpful or real. It has been a case of giving with one hand and

¹ *The Report on the Working of the Ottawa Agreement during 1934-35* (Government of India) contains figures of the imports of Indian linseed into the United Kingdom up to 1934 only. I have, however, included the imports for 1935 as well, and have shown that a tremendous diminution, from India's point of view, was registered in that year. But the Report gives the exports of linseed from India to the United Kingdom, to all Empire Countries and to all Foreign Countries, in 1934-35, as

taking away with the other. Statutory provision having been made in the (British) Act, as mentioned above, Treasury by Order can bring about changes in drawbacks, and no legislation by Parliament is necessary for the purpose. Thus it is possible for a Ministry to undermine and vitiate the good intentions of the representatives of the people.

The exports of oilseeds, in general, should be regarded as a national loss of the first magnitude. They involve the sending out of the fertility of the soil, inasmuch as the country is deprived of the cake which is the best food for cattle and an excellent manure. Seed fetches a low price as compared with oil; so India is a loser in supplying the first rather than the second. Industrial enterprise suffers through the absence of modern oil mills, and due to the non-existence of concerns which could utilize the oil for various commercial uses. And lastly, after obtaining lower prices for raw material, and having lost the oilcake, we import finished products and pay highly for them. In whatever way we treat the subject, the conclusion stands that there is a strong case against the exports of oilseeds by India. So far seeds are expressed in large quantities, but by crude processes only. Modern oil-presses and manufacturing should be set up in the land, and their products exported instead. Indian castor, groundnut, and linseed enjoy a good

103·8, 132·5, and 105·9 thousand tons respectively; whilst I put them at 98·4 thousand tons for the United Kingdom and 130 for all other countries. I obtained the amounts from the *Accounts relating to Sea-borne Trade and Navigation of British India*, March 1935, and am not aware if the Director-General of Commercial Intelligence and Statistics, India, had received more correct or revised data from his department; but, fortunately, his total for 1934-35 (as also all the figures for the previous years) is the same as mine. I do not think it necessary to distinguish between the other Empire and Foreign countries as India did not enter into trade agreements with the self-governing dominions; and the share of the few colonies where she does receive preferential treatment is very small in the exports of linseed from India. Nevertheless, I am in complete agreement with the introductory remark in the Report, that "The relative position of India in that (i.e. British) market will therefore supply the primary evidence necessary to judge the success or otherwise of the preference secured by India on her exports to the United Kingdom (p. 3). I have examined India's case in this very spirit.

reputation abroad, and there is no reason why their oil, properly expressed, should not be as good. The exports of mustard and rape and sesamum oils are showing tendencies towards expansion.

At present the peasants cannot afford to buy much cake; and they regard the mill cake as inferior for cattle because it contains less oil than the hand- or bullock-pressed cake. On the contrary, experience on Government farms proves that too much oil is not good for the cattle, and that the mill-cake still contains more than enough oil. A preliminary to the modernization of Indian oil industry is the removal of the prejudice against the mill-cake. Suggestions have been made that special storage facilities and transport accommodation should be provided for the carriage of oil.¹ Tank wagons and tanks on steamers will, no doubt, prove helpful. With the necessary reforms in the industry, and with the aid of intensive experiments and researches aiming at better and cheaper extraction, improved refinement and new and more profitable uses for oil, greater prosperity may be brought to the growers of this group of very important industrial crops.

E. COTTON

One of the two fibres for which India is famous the world over is cotton. For generations it has been a great cash crop of the country, but recently it has gone through vicissitudes on account of the economic depression. The largest area ever sown under cotton in India was in 1925-26, when it reached 28,403,000 acres. Since then it gradually decreased to 22,483,000 in 1932-33, a diminution of about 6 millions; and was less than 24 million acres in 1934-35. Similarly, the biggest outturn of cotton, 6,215,000 bales (of 400 lb. each), was in 1925-26: it went down to 4,007,000 in 1931-32, and stood at less than 5 million bales in 1934-35. It is grown all over India, but Bombay (including Sind), Central Provinces, and Berar and Hyderabad State have the largest area under the crop, followed by Madras and the Punjab, with the rest of the country far behind. The Punjab and Madras often changed places in the matter of greater acreage; but for

¹ Vide *The (Indian) Crop Planning Conference, 1934.*

the first time, in 1933-34, the former beat all the rivals in the total amount of produce. In 1932-33 the Punjab had sown 1,890,000 acres with cotton, and produced 555,000 bales. Among the provinces and states mentioned in the table above, the yield per acre in the Punjab was, normally, second only to that of the United Provinces; but in 1933-34 it obtained an exceptionally good harvest. So its increased area—being 2,449,000 acres in 1933-34—and high yield, against the reduced acreage in Bombay and

*Production of Cotton in 1934-35**

(Bale=400 lb.)

Provinces and States	Area in Acres	Yield in Bales
Bombay (including Sind)	4,200,000	784,000
Central Provinces and Berar	4,240,000	611,000
Madras	2,320,000	477,000
Punjab	2,347,000	946,000
United Provinces	705,000	192,000
Total British India	14,439,000	3,162,000
Hyderabad	3,101,000	443,000
Total Indian States	9,468,000	1,674,000
Grand Total	23,907,000	4,836,000

* Source: *Estimates of Area and Yield*, op. cit., 1934-35.

rather poor pickings in the Central Provinces, combined to help the Punjab to the top—producing 927,000 bales in that season. This brings out the growing importance of that province in the production of cotton: and what lends greater emphasis to this fact is that it has taken up the cultivation of American cotton in earnest. The Punjab and Sind produced 398,000 and 76,000 bales of the long staple in 1934-35, and it amounted to 9·8 per cent of the total cotton crop of India, against 8·0 per cent of the previous year. The Punjab-American cotton has proved very successful,

and is much in demand both for the Indian mills and export to the United Kingdom. Sind, on account of the peculiar climatic and soil conditions, has always been regarded as a potential long staple cotton area; and schemes are afoot to reserve a part of the land, brought under cultivation by the canal systems, for the growing of that type of cotton. The United Provinces play a minor rôle in this commodity, and her cotton area is centralized in the western districts—especially in the south-western part—growing mostly *desi* (indigenous) short-staple variety. Other provinces in Northern India occupy a negligible position in respect to cotton.

After cotton has been picked, and before it is ready for being woven into cloth, it passes through a number of processing operations. First of all, it is ginned, separating the seed from the lint, then pressed, and later baled in standard sizes and weights. From the gins and presses, the bales are sent out either for export abroad, or to the spinning mills for the manufacture of yarn. It was during these stages that adulteration, damping, and other fraudulent practices used to take place. The growers and balers alike used to indulge in the orgy of spoiling the cotton in order to make some unlawful gain. With a view to stopping these malpractices, drastic action became necessary, and in 1923 the Cotton Transport Act was passed, enabling any Local Government to notify definite areas of cotton for protection, and to prevent the importation of cotton from outside the area except under licence. Effect has been given to this piece of legislation in the chief cotton-growing regions, and it has gone a long way in preventing the imports of inferior varieties into tracts producing superior qualities. Another measure to discourage adulteration was adopted in 1925. The Cotton Ginning and Pressing Factories Act aims at tracing at any future date the bales prepared by the various firms. According to this Act, the gins and presses are to mark their bales distinctively and in serial number, so that if any fault is discovered in a particular consignment, even at a distant date or place, it could be traced to the baler. The sole responsibility in that case will rest with him. These are two of the achievements

of the Indian Central Cotton Committee, who sponsored the Bills. They are doing other useful work by striving to improve the varieties of cotton, carrying out researches, and experimenting with different types of fibres, undertaking field investigations, compiling cotton statistics, and granting scholarships for promoting the advanced study of cotton and its problems.

The United States of America is the world's largest producer of cotton, with India second, and Egypt third. India produces mostly short staples, while the other two are known for long cottons. This accounts for the lower reputation of Indian cotton in the international markets. Though up to 1930-31 her exports were not very large (as compared with the United States), they formed substantial percentages of the country's produce. Afterwards, however, specially in 1931-32, India began to lose ground. Two factors were responsible for these results. First of all, the obtaining of unremunerative prices had since 1929-30 led to the gradual reduction in the area under cotton, and in 1931-32 the acreage was further cut down. The output had thus been diminishing; but unfavourable weather conditions in the autumn of 1931 greatly shortened the crop of that year. Simultaneously during the last three years there had been an increased demand on the part of the Indian cotton mills for the home produce: less quantities were consequently available for export. Thus the prices of Indian cotton were kept comparatively on a high level; and during 1931-32 and 1932-33 they remained above world parity, i.e. they did not fall to the same extent as the American and Egyptian. Therefore the difference in prices between the Indian and other cottons became less, and the countries formerly using Broach started using the Middlings and Sakel-laridis.

Secondly, because Indian industry was suffering keenly from the competition of Japanese textile goods, the Government of India passed, in June 1933, protective legislation prescribing higher rates of duty on foreign—including Japanese—cotton piecegoods. This, in turn, caused resentment in Japan, and took the shape of boycott of Indian cotton, which lasted for six months

*Exports, and Index-Numbers of Average Prices, of Ginned Cotton**
(In gold francs per quintal)

Seasons	United States				India		Egypt		
	Exports, thousand metric tons	Percentage of Production	Index Numbers of Prices (Middling, New Orleans)	Exports, thousand metric tons	Percentage of Production	Index Numbers of Price (M.G. Branch, F.G., Bombay)	Exports, thousand metric tons	Percentage of Production	Index Numbers of Prices (Sakellaridis, F.G.F., Alexandria)
1927-28	1,836.4	65	100 (base)	560.1	52	100 (base)	301.2	110	100 (base)
1928-29	1,962.5	62	95	700.2	67	89	356.0	98	94
1929-30	1,629.7	50	81	688.2	72	72	288.8	75	76
1930-31	1,650.7	55	50	675.0	71	47	302.5	81	43
1931-32	2,122.2	57	31	321.5	44	36	340.2	122	25
1932-33	2,071.8	74	34	481.9	57	36	285.1	128	26
1933-34	1,858.4	66	34	580.2	64	33	404.9	105	25

* Vide *Agricultural Situation*, I.I.A., 1933-34, op. cit.

till January 1934. In the meantime, owing to the fall of the dollar in March 1933, and to the attempts of the United States at curtailing the sown areas and thus to raise the price-levels of the agricultural commodities, the American cotton registered a rise of many points. The prices in Liverpool on April 7, 1933, of Middling American and Fine Broach were \$5.28 and 4.61 respectively (an 87.3 per cent parity of Indian on American); while, on March 30, 1934, they were quoted at \$6.35 and \$4.72 respectively

*Exports of Raw Cotton from India**
(in tons)

Year	United Kingdom	Japan	Other Countries	Total
1928-29	43,059	287,508	332,229	662,796
1929-30	48,255	292,781	385,828	726,864
1930-31	50,148	301,018	349,903	701,069
1931-32	20,723	192,818	209,539	423,080
1932-33	29,846	193,688	144,799	368,333
1933-34	61,037	182,565	243,764	487,366
1934-35	61,933	359,033	194,347	615,313

* Sources: (a) *Annual Statement of the Sea-borne Trade of British India, 1932-33*; (b) *Accounts relating to the Sea-borne Trade and Navigation of British India for March 1935*.

(a parity of 74.3 per cent).¹ The price movements led to the displacing of the American cotton, to a great extent, by the Indian; and the cumulative effect was that the Indian exports to Japan, in the whole financial year 1933-34, did not fall very much as compared with 1932-33. Although the boycott was in operation in the latter half of 1933, on account of the prevalence of the relatively great spread between the prices of Middling and the Broach cottons, Japanese spinners had already made heavy purchases in the earlier half of 1933-34. And in January 1934 a Convention and Protocol regulating the exports of raw cotton from India to Japan and those of cotton piecegoods in the reverse direction was signed between the two Governments. The settling

¹ Vide: *Review of the Trade of India, 1933-34*, pp. 86-94.

of the dispute between the two countries gave a much-needed fillip to the Indian cotton.

At Ottawa the British representatives had promised to try to promote the use of Indian cotton in Lancashire. As a consequence, a British Textile Mission visited India in 1933 and entered into the Bombay-Lancashire Textile Agreement with the Millowners' Association, Bombay. The British Cotton industry undertook to recommend effective action being taken to popularize and increase the use of Indian raw material; and the Bombay millowners agreed to the imposition by the Government of India of lower import duties in favour of certain types of British cotton piece-goods in future. The Japanese and Lancashire Agreements expire on March 31, 1937, and December 31, 1935, respectively.¹ It is desirable that the Indian cotton industry should prosper, and the Tariff Board have enquired from time to time in order to safeguard its interests, and a fair amount of protection has been extended to it. But it is no less desirable that the Indian raw cotton should have good and favourable markets. It is necessary, for this purpose, to retain the goodwill of the importing countries; and the negotiating of agreements, similar to those mentioned above, cannot be too emphatically stressed. The attempts of the Punjab and Sind to grow long and medium staples will add to the bargaining power of the Indian product, and may be expected to lead to its wider utilization.

F. JUTE

Among all the agricultural commodities produced in India, jute stands in a class by itself. Its cultivation is confined practically to one province, Bengal. Not only was it responsible, in 1935, for about 90 per cent of the total output, but it depends on jute to such an extent that it has not developed any other money crop. Bengal cultivates rice extensively, but it is solely a food crop. Apart from these two, the area under other crops is very small indeed. Jute is easy to grow, as it takes about sixteen weeks only to be ready for cutting, and as many as four harvests can be had

¹ See note 2 on p. 62 supra.

in the course of one year. The yield per acre, too, as compared with cotton, for example, is heavier. These factors, combined with favourable growing conditions and the relatively high prices, led in the past to the dependence of the peasant more and more upon jute. India held an almost complete monopoly in that product, and, till recently, there were no formidable rivals or substitutes. Gunny cloth and bags were regarded as indispensable for all sorts of packings, so the whole world turned to Bengal for their supplies. As the international trade expanded, the exports of jute and its manufactures also increased. Under such circum-

*Production of Jute in 1935**

Provinces	Area (acres)	Yield in bales (cf 400 lb. each)
Bengal	1,670,000	5,707,000 (89.6 per cent)
Bihar and Orissa ..	146,000	356,000 (5.6 per cent)
Assam	112,000	257,000 (4.0 per cent)
Total: All-India ..	1,947,000	6,372,000 (100)

* Source: "Estimates of Area and Yield, 1934-35."

stances it was but natural that large quantities of Indian jute should find a market beyond the shores of the country. In other words, jute was most international in character, and was, consequently, very much vulnerable to world trade fluctuations.

Although jute is grown, in small amounts, in two other provinces also, nearly all the mills are localized in Bengal; therefore the terms Indian and Bengal in this connection are interchangeable. The first jute-mill to be started in Bengal was in 1855, and the first power loom was introduced in 1859. Since then, both the cultivation of the crop and the industry have undergone immense developments. During the Great War the value of the manufactures was doubled: the average for the period 1909-10 to 1913-14 was Rs. 20 crores, and for 1914-15 to 1918-19 Rs. 40 crores. The post-War depression caused a slump in the trade, but it recovered again after 1924, and the progress was continued. In 1930 the

huge crop of over 11 million bales was harvested, which had been exceeded only once in the history of jute production, that being in 1926, when the total output amounted to 12·132 million bales. The prices had already adopted a downward trend after 1925 (having reached as high a level as Rs. 123 per bale in January), but the diminution was gradual. Later, the "great depression" began to affect jute in 1930, at a time when the abnormal harvest

*Production and Exports of Jute**

Years	Area (000 acres)	Output (000 bales of 400 lb. each)	Exports (in thousands)		
			Raw Jute (tons)	Gunny Bags (numbers)	Gunny Cloth (yards)
Average 1919-20 to 1923-24	2,291	6,438	554	404,259	1,270,305
Average 1924-25 to 1928-29	3,250	9,846	768	452,028	1,508,368
1929-30	3,415	10,335	807	522,291	1,650,525
1930-31	3,492	11,205	620	434,046	1,271,000
1931-32	1,862	5,542	587	388,532	1,021,070
1932-33	2,143	7,072	563	415,085	1,011,691
1933-34	2,517	7,987	748	401,644	1,052,581
1934-35	2,670	8,500	752	422,949	1,063,473

* Sources: "Estimates of Area and Yield," *Review of the Trade of India. Statements and Accounts of the Sea-borne Trade of India*. Note.—Area and output figures are for calendar years (beginning 1919).

was itself causing embarrassment. Through the joint action of the two, the prices started to fall heavily from the second half of 1930 onwards. Hence the cultivation and production of jute in 1931 was reduced to about half of that of the previous year, and a rise in prices was expected. But as heavy stocks of manufactured jute in India as well as abroad had accumulated in the past, and also due to the absence of revival in the world trade in raw materials, the prices remained very low. At one time in the year 1931-32 they fell to Rs. 24 per bale. The extent to which Bengal lost her export trade in jute and manufactures have been pointed out in a former table. Because it is about the only supplier of jute,

whose figures interpret an absolute decline rather than a transfer of trade.

The diminution in the foreign demand is naturally, in the first instance, due to the present economic crisis. Commerce had universally decreased, and packing requirements grew smaller. But, simultaneously, another tendency was noticeable in the great exporting countries. The world-wide drop in the prices of the various commodities had focused the attention of the respective administrations and producers on the question of costs. In order to make it profitable to sell goods at the ruling rates, it was deemed necessary to market them cheaply. One major economy suggested

*Average Wholesale Prices of Raw Jute**
First Mark, Calcutta (per bale of 400 lb.)

Year	Rs. s. p.	Year	Rs. s. p.
1919-23	89 14 4	1930	50 4 9
1924	75 13 5	1931	37 5 6
1925	111 9 9	1932	31 11 0
1926	98 11 6	1933	26 11 6
1927	76 6 0	1934	25 15 6
1928	75 0 11	1935†	32 9 4
1929	71 4 0		

* Sources (a) *Statistical Abstract*, 1934; (b) *Wholesale Prices in India*.

† Note.—1935 prices are for six months (January to June) only.

in the case of cereals was bulk handling. By this means the expenses involved in buying bags and sacks, and in filling, loading, and unloading them at different points, wastage in transit, etc., are eliminated or very much reduced. Under bulk handling, grain is poured down direct from the elevators and warehouses into trucks in railway sidings, and finally pumped into the steamers. This method, existing in the United States for decades, became lately more universal. It is now practised largely in Canada also, and is being adopted in Australia. To that extent jute has gone out of demand. Moreover, certain fibres are being increasingly used for packing purposes in wholesale and retail trade. The cheapness of

cotton in the States, during the last five years, prompted the textile manufacturers to find new outlets for their goods: one of them was to substitute cotton for jute in the packings. Its greater durability rendered cotton more suitable for the making of bags and wrappings, the improved appearance and attractiveness of which were regarded as additional points in favour of the home fibre. Paper superseded jute in certain trades, e.g. for packing cement, in some countries; while in others serious attention was paid to the cultivation and the development of sisal hemp, flax, etc. Thus the danger behind the apparently temporary reduction of jute exports is that although the buyers elsewhere may have initially cut down their use of jute for a short time only pending the revival of trade, in the intervening period they may start experimenting with other methods of packing, and ultimately introduce a complete and permanent changeover. It is not possible to compute how far the low prices of jute are the result of the depression, nor is it possible to foretell as to when they would be expected to recover. It is admitted on all sides, however, that many of the old buyers of jute are making strenuous efforts to become independent of that article. The manner in which Bengal agriculture has suffered, during the decade 1924-25 to 1933-34 has been shown in an earlier chapter.¹ Those figures reveal that in 1925 the total value of the jute crop at the average harvest price was Rs. 72·6 crores, while in 1931 it amounted to Rs. 10·3, and in 1932 (with larger production, but still lower prices) to Rs. 10·5 crores. Although the annual average price remained almost the same as in the previous year, owing to greater output the total value of the jute crop in 1933 increased to 12 crores of rupees.

Jute's plight, in so far as it is due to substitutes and alternative methods of packing, should be put at the door of the millowners. They have not shown any enterprise in instituting research, discovering new uses, and conducting experiments. Since the introduction of the power-loom, seventy-five years ago, hardly any important change has taken place in the industry, nor any funda-

¹ See *supra*, pp. 85-7, also *infra*, pp. 317-26.

mentally improved results obtained. Whatever progress has been achieved is entirely to the credit of the agriculture department in evolving and popularizing better and more suitable strains. The manufacturers, living in the paradise of monopoly and basking in the sun of large profits, never seemed to have given a thought to the future. Prior to 1929 and 1930, ordinary shares in well-managed jute mills usually earned dividends of about 50 per cent per annum, and 100 and more was quite a frequent rate.¹ The tea industry provides a parallel. Because India was not in a monopolistic position, though she was the biggest producer barring China—and Chinese tea was not much favoured in the West, especially in the United Kingdom and the States—the Tea Association requested the Government of India, in 1903, for the imposition of a cess of quarter of a pie on every lb. of tea produced in India and exported outside the country.² The rate, after several enhancements, was fixed, in September 1933, at 8 annas per lb.: the entire proceeds are administered by the Indian Tea Cess Committee. The fund thus, voluntarily, created is spent on promoting the sale and manufacture of the Indian tea. Despite the fact that the tea planters have not been earning as fat dividends as the jute manufacturers, the former have been providing increasing sums of money to finance propaganda and publicity campaigns at home and in Europe and America.³ It is, primarily, the function of an industry itself to devise ways and means of improving it. If difficulties arise, or for the sake of uniformity and smooth working, the Government may be asked to help in the arrangements. Such a spirit has been conspicuous by its absence among the manufacturers of jute. They have been content in the knowledge that, if the world needed gunny bags and cloth, they alone could supply them. The importance of reducing the manufacturing costs and selling prices in order to increase the annual turnover, and to lessen the chances of success of rivals, was not recognized.

¹ Vide *Investor's Indian Year Book*, by Place, Siddons, and Gough, Calcutta.

² Vide Tea Cess Act, 1903.

³ "Annual Reports of the Indian Tea Cess Committee" in the *Annual Statistics of the Tea Industry*.

And the peasant, ignorant of the factors of supply and demand and sublimely happy in the high returns his jute was bringing each season, believed that his sole business was to grow and not to reason why. The situation may be summed up in the words that lack of foresight has, mainly, been responsible for the supplanting of jute by other materials in almost every trade.¹ Much larger quantities could be absorbed in making carpets, linoleum, oilcloth, artificial leather, cords, ropes, and cables, and in furnishing, upholstery, and car industries—to name a few—if the qualities of jute required for these purposes were found out and attempts made by the jute manufacturers to remove the shortcomings.

Bengal, or the jute belt of India, is at present faced with three vital issues, one being that of low prices. Many experiments in different parts of the world have been tried since 1930 to control the production and marketing of the agricultural crops with a view to avoid the accumulation of stocks, and simultaneously to raise prices so that it may be worth while for the farmer to sell. Some of these schemes will be discussed in a later chapter, but it may be pointed out here that restrictions on the cultivation of jute for the sake of pushing up prices will fail to achieve the objective. The desired effect cannot be produced by curtailing supply. The demand should decidedly be taken into consideration. So long as the latter does not improve, the prices cannot be expected to take a turn for the better: this is what was experienced in 1930 and 1931. In the face of the alternatives and substitutes reduced supply cannot be as effective as under complete monopolistic conditions. Even if through drastic restriction of production the prices manage to struggle upwards, in the existing circumstances the demand for packing material may be diverted from jute to cotton, paper, hemp, etc., and may lead to the greater adoption of bulk handling. High prices of jute will provide a working margin for its rivals, and an incentive to the users to discard it and take to the substitutes instead. Therefore, interference with the free play of supply and demand is *prima facie* inadvisable. They should be allowed to find their own level.

¹ *Report of the Bengal Jute Enquiry Committee, 1934.*

Possibly the salvation of the *ryot* lies in low prices, reduction in the expenses of cultivation and manufacture, and in broadening the market by finding new uses of jute. In spite of the considerable diminution in the area and the consequent short crop in 1930, prices kept falling. Subsequently the peasant increased the area, calculating that a smaller return per unit on a larger crop is more to the advantage than living in the hope of a higher return after retrenching the cropped area: in 1935, however, the jute area was again drastically curtailed, resulting in a much reduced harvest. As it is, additions have taken place, in Bengal, in the area under

*Changes in the Cropped Area of Bengal**

Crops	Thousands of Acres		
	Average, 1924-25 to 1928-29	Average, 1929-30 to 1933-34	1934-35
Rice	20,386.6	21,277.4	20,740.0
Sugar-cane	205.4	224.0	276.0
Wheat	123.0	140.0	155.0
Tea	188.4	198.0	199.9
Jute	3,250.0	2,685.8	1,670.0
Tobacco	Varying between 280 and 290		308.0

* Source: "Estimates of Area and Yield."

other crops, and that under jute is now appreciably less. No doubt the additions are taking place in units and tens of thousands, while jute reductions amount to hundreds of thousands, but there are definite indications that a gradual readjustment of crops is going on in the Presidency. Agriculture, as a whole, may not be so paying in the future as it was in the past; but at the moment it is passing through a perfectly natural course which cannot be interfered with. It is not possible to guarantee a certain amount of return to an agriculturist if he grows one particular commodity and not the other. When the fate of the superseding crops is unknown, the State cannot assume any responsibility in suggesting them. How, then, can it be regarded a wise policy to recommend,

in any form, the restriction of the cultivation of jute? What is needed is that facilities and information pertaining to the production, marketing, and prices of those commodities which are capable of being grown as substitutes for jute, be placed at the disposal of the *ryot* to help him in arriving at the right choice. The changes in cultivation should come from within, and not be imposed from without.

This brings us to the other great problem that is facing Bengal. The commercial bodies having failed to safeguard the interests of jute in the world markets, it becomes incumbent on the public authorities to protect the industry, particularly the growers who are unable to look after themselves. The Central Government derives large revenues through the export duty on raw and manufactured jute; so from the point of view of their finances, too, they should be concerned in improving the prospects of jute. Since the Royal Commission on Indian Agriculture recommended the institution of a Central Jute Committee, the question has been hanging fire. The Governments of India and Bengal and the European and Indian business communities are principally involved; but, as all the parties have not been able to see eye to eye so far, no scheme has been adopted. There are still some hesitant elements which deem the time inopportune, and want the economic conditions of the country to return to normal before the Committee is created. When there were prosperous days, no one had the keenness of perception to see into the future; while now, when every national Government is trying hard to alleviate the sufferings of the agriculturist class, when the Governments in India are ready to do something, the advocates of "sound finance" think that a sum of Rs. 5 lakhs can be ill spared. We may refer them, however, to the work done by the Indian Central Cotton Committee and say that its counterpart for jute is long overdue. But as jute affects Bengal most, an all-India Committee is out of place. No co-ordination with the various administrations or Indian States will be necessary; and the conditions that will, at any time, exist in Bengal will be more or less applicable to Bihar and Orissa and Assam also, which market their jute through the

former. So a Bengal Jute Committee, with representatives of the Governments of India and the other two provinces, will be a peculiarly suitable body. In 1929 the Central Government informed the Government of Bengal of its readiness to reduce the jute export duty to the extent of Rs. 5 lakhs annually.¹ The local administration could, then, levy a cess on jute yielding the same amount per annum. Under the Government of India Act, 1935, one-half or any greater proportion as may be determined later of the net proceeds of the jute export duty, shall be assigned to the provinces according to the amounts of jute grown there. Consequently, in order to provide funds for the Jute Committee, the Central Government and the three provinces should relinquish portions of the export duty in the same proportions in which they will be sharing the net proceeds under the Act of 1935. In other words, while the net revenue from export duty will be shared roughly 50:50 between the Central and the three Provincial Governments, they should contribute towards the Jute Funds at the same rate.

The Committee² should be entrusted with research (agricultural, industrial, and commercial), compilation of statistics, imparting of relevant information, publishing forecasts, etc., and propaganda (both agricultural and commercial). Although it will be an essentially advisory body, it should not be left to the mercy of the trade. If the object of such an institution is merely to disseminate intelligence about cultivation methods, collect statistics, and experiment with various strains and fibres, it will best be performed, as hitherto, by the provincial Agricultural Department, and the committee will become for all practical purposes a research station like others already in existence. The Central Cotton Committee, remaining advisory in character, successfully sponsored two Bills. Similar opportunities should

¹ Department of Education, Health, and Lands, Letter No. 1069-Agri., June 27, 1929.

² After the above lines were written the Government of India constituted a Central Jute Committee; vide *Supplement to the Gazette of India*, dated May 30, 1936, pp. 368-369.

not be denied to the Jute Committee. It is often pointed out, in this connection, that trade in cotton is regulated by the East India Cotton Association, Bombay, and that the Central Cotton Committee do not interfere with it. If the former body has organized the business in an efficient manner and has fixed permanent standards, occasion for any action on the part of the latter does not arise. But if the Association fails in these functions, it is the duty of the authorities to intervene and reform the existing system. The importance of standardization and grading, and their absence or looseness in India, have been discussed at various stages of our study. Many countries, e.g. United States, England, Denmark, and New Zealand, exporting large quantities of agricultural and farm produce, have been obliged to appoint State Inspectors to test and pass the goods before they can be sent out. Similarly, if defects exist in the standards and grades of jute, and if the commercial community does not carry out the desirable changes, the Government should not be partial to the traders, and should in the interests of the growers and foreign trade of India legislate to the necessary extent.¹ The reputation of the country's products and the national prestige should be important considerations with the State. Obviously the Jute Committee will be a fit body to investigate this matter and prepare draft legislation. There is no sanctity about the constitution of the Central Cotton Committee: it can be, and should be, modified as occasion demands, and should not be founded on static conceptions. And the proposed Jute Committee need not be rigidly modelled on its cotton prototype. So long as the conditions are alike, uniformity is to be preferred; but where they are different each commodity would require special treatment. A committee representing and safeguarding all branches of activities in jute, with comprehensive powers, will prove more beneficial than any half-hearted and halting measure.

The third problem deserving immediate attention in Bengal is the state of jute futures. Three futures markets are functioning

¹ See the Reports, also Evidence, of the Banking Enquiry and Bengal Jute Committees.

at present at Calcutta; but the terms of transactions of two of them are very low, and lead to harmful speculation involving unscientific buying and selling. The third, the East India Jute Association, is a much superior institution in these respects. All the interests, however, are not represented on the management: the traders only can be the members, and the agriculturists are left out. In the last chapter¹ it was said that, morally, the practice of hedging is regarded as reprehensible by some people; but if performed under satisfactory regulations, and if the dealings are all above-board, it can prove advantageous. In correlating the world demand and supply, in making a world price and keeping it uniform, in minimizing and smoothing out price fluctuations, in discounting the impact on the market of forecasted supply and demand, and in spreading over a long period the burden of distribution of a short-period agricultural harvest, futures markets perform fundamental services.² If the usefulness of these institutions is recognized, it becomes imperative that constant supervision and close watch be maintained on them. The most competent agency to carry out this task is the Government of the province, which should see that no harmful effects result out of the working of the "futures." The failings of the trade in this matter should be remedied by State action. Here, again, the considerations that exist in the fixation of standards and grades arise. Who should be charged with the new duties? It is suggested that both stand on the same footing and require identical treatment. Therefore necessary steps should be taken to invest the proposed Jute Committee with authority to introduce such changes in the futures trading as will give representation to all the interests, and which will tighten up the rules and terms governing the transactions so that the irresponsible operators may be eliminated.

¹ See *supra*, p. 176.

² Vide *The Proceedings of the International Chamber of Commerce, Washington Congress, 1931*.

PART III

PROBLEMS AND POLICIES

CHAPTER IX

THE CRUX OF INDIAN MARKETING

THIS brief review of Indian economic structure and the detailed study of marketing methods inevitably give rise to the question: what is the basic trouble underlying the present state of affairs? And what should be done to ameliorate the condition of the growers of the agricultural commodities? The agricultural situation in India is so complex, and the evils so deep-rooted, that a well-thought-out and far-sighted programme is needed. In order to make the cure effective and permanent, the treatment should penetrate below the surface and remove the causes that have led to this degeneration. The nature of Indian agriculture and the circumstances to which it is subjected are very different from those obtaining in Western countries. It follows that the methods adopted will have to be peculiarly suited to the particular problems facing the country, and not a mere imitation of those found abroad.

Since the inception of the Depression, most of the foreign governments have passed legislation and initiated measures to help the agricultural community. In many countries the work of voluntary and co-operative associations has been done under official aegis or, at least, has been strengthened and regularized through State patronage. But, generally speaking, these activities have been essentially of an emergency character, aimed primarily at enabling the farmers to tide over the crisis. When, in 1929 and 1930, the world-wide slump started and prices began to fall, European nations (the principal customers of the agricultural New World) imposed new and drastic restrictions on the imports of farm products. The policy was given effect to by means of tariffs, quotas, fixation of minimum proportions of home produce for processing industries, subsidies, bounties, and guaranteed prices to growers. The result was an accumulation of heavy stocks

across the Atlantic bringing the prices down still further; this, in turn, involved the tightening of regulations in importing countries; thus things went on in a circle.

Formerly in the United States the huge agricultural production, despite the high standard of living and large local consumption, yielded surpluses, and used to lead to substantial exports. It was to meet the contingency of a sudden and a severe drop in exports and prices that the Agricultural Marketing Act was passed in 1929, and President Hoover established the Federal Farm Board. Its main functions were to help corporations and co-operative organizations of farmers to market their commodities, to buy up necessary amounts of the same to keep prices high, and to carry on an active propaganda to persuade the producers to curtail cultivation. A revolving fund of \$500 millions was created for these purposes, and placed at the disposal of the Farm Board. For two years it went on buying the produce and advancing loans to the growers through their associations so that at the end of the crop year 1930-31 it found itself with about 250 million bushels of wheat on its hands. The mounting stocks possessed by the Board were proving embarrassing, although since July 1, 1931, it had contracted to sell 47·5 million bushels to Brazil, China, and Germany, and had provided vast supplies for the relief of distress in the States following upon short crops caused by the drought of 1930. Smaller agricultural production had, for the time being, led to a rise in prices, but it was a debatable point if the Board's endeavours had brought about any permanent improvement in prices. Consequently in 1931-32 the work of the Federal Board was very much reduced, and it abandoned its efforts to stabilize the prices of wheat and cotton. Later, in May 1933, President Roosevelt launched his Agricultural Adjustment Administration, superseding the Federal Farm Board. It was based on the policy of curtailing the country's agriculture in order to clear stocks and to re-establish prices, and was to be achieved by making payments to farmers to induce them to withdraw arable land from cultivation. The necessary funds were provided by imposing processing taxes on industries using agricultural commodities as raw material.

Some success was claimed for this scheme; but in January 1936 it was declared unconstitutional by the United States Supreme Court, and was subsequently closed down. Afterwards other schemes were started with a view to achieve the same object, but by different means and on smaller scales.

While in Canada there is a similar huge agricultural production, owing to the small population the exportable surplus and the dependence on foreign markets is much greater than that of her neighbour. Large combines of farmers known as "Pools," and working on co-operative lines, had been in existence for some time. They were marketing organizations spread in a network over the three prairie provinces producing wheat, and were concerned with collecting grain from the individual growers. A part of the price was paid initially and the balance, after the deduction of a small amount on account of working expenses, on the actual sale. In order to be better able to fight the economic crisis the Pools tightened their control on the available supply of wheat with the intention of holding it for a rise in prices. The real motive was to corner the world market—Canada being one of the biggest exporters of wheat—and thereby force the prices. The objects—to organize the marketing of wheat and to stabilize prices on the world market by systematically adjusting supply to demand—were essentially the same as those of the Federal Farm Board. But the holding of great stocks during a long period of falling prices involved the Pools in losses and, ultimately, the Provincial and Dominion Governments had to intervene. The former gave a financial guarantee to the banks which had from time to time advanced loans to the Pools; and the latter appointed an administrator to dispose of the wheat accumulated by the Elevators, and to determine the selling policy in the future.

The conditions in England, on the other hand, are rather different. The standard of life is high and, considering the area, the population is large with very heavy density; but owing to extensive industrialization and vast residential requirements, agriculture occupies a very minor place in her national economy. It is a matter of common knowledge that since the War she has supplied

from home production about 15 per cent of her total consumption of foodstuffs.¹ For the rest she has to buy from abroad: this applies with greater emphasis to raw materials for her industries. The very existence of Great Britain, in this way, depends on the imports of agricultural commodities from different parts of the world. Obviously, while trying to safeguard the home produce from being ousted by cheaper foreign goods during the present depression, she could not make the tariff rates prohibitive for the overseas products. Moreover, she did not want to raise prices substantially. Hence the United Kingdom decided upon a two-sided policy. Firstly, by means of the Ottawa Agreements with the different units of the Empire (based on mutual preferential treatment) and, through entering into unilateral and bilateral commercial treaties with Argentine and Scandinavian and a few other countries (on the basis of the most favoured nations clause), she made sure of her usual supplies. The trade with the latter countries was to be of a reciprocal nature, and the share of most of them in the British market was fixed by quotas as determined on various occasions. Secondly, besides protecting them in this indirect manner, the Government deliberately aimed at inwardly strengthening the position of the farmers. The producers of wheat at home were helped directly by the Government announcing a standard price: the farmers selling in the open market were to receive a "deficiency payment" equal to the difference between the standard price and the average market price. The scheme was to be financed out of the "quota payments" made by the miller and flour importers on all flour, milled or imported. A provision for limiting the "deficiency payment" in case the area under wheat increased unduly, was also made. British wheat growers were thus assured of a certain return, despite the low market prices. Simultaneously, under the provisions of the Agricultural Marketing Acts of 1931 and 1933, the regulation of the production and sale of certain farm products (e.g. potatoes, hops, milk, pigs, and bacon) was entrusted to the

¹ Vide *Agricultural Output and Food Supplies of Great Britain*, Ministry of Agriculture, 1929.

respective Marketing Board appointed by the Government on the request of the producers, or on the report of a Reorganization Commission.

In these diverse ways the authorities in the United States, Canada, and the United Kingdom came to the aid of their agriculture. The State intervention with measures of protection and assistance, sometimes far-reaching, was mostly designed empirically. Application of planned economy to agriculture has been the talk of the day, but the importance of its prerequisites—a complete co-ordination between all forms of production and economic activities—has not been generally realized. Nevertheless, whatever success has been achieved was mainly due to the fact that the farmers were conversant with the modern methods of cultivation, and were performing them scientifically. They had the necessary facilities for marketing, or at least they were not specifically handicapped in any manner. But as they were unorganized and were not acquainted with marketing business, in the face of an unprecedented and world-wide economic crisis they were rendered helpless for the time being. They were, at any rate, equipped to benefit from the State assistance, and were ready to avail themselves of the opportunity. The base was sound enough, and any edifice built upon it had reasonable prospects of remaining firmly in its position. The situation in India, however, is very much—if not quite—different. The foundations of present agriculture cannot be called safe; therefore *ad hoc* schemes of the foregoing types will have little chance of success. We have in the previous chapters brought out the weak points of Indian cultivation, and discussed the difficulties encountered by the *ryot* in the course of marketing his crops. It is, primarily, in the improvement of the agricultural methods and the removal of the marketing disabilities that the solution of the rural problems of India lies.

It is often suggested that the ~~costs of marketing are high~~, and that they should be reduced so as to benefit the peasants. But the term "marketing costs" is vague. What items, for example, should be included under it? When should a line be drawn between

cultivation expenses and marketing costs? Some items commonly classed under the first may also be correctly grouped under the second. For instance, a particular type of hard wheat may be specially grown in India with a view to export it to Europe, where it may be in demand for mixing with Russian wheat. The cultivation of this wheat may prove more expensive than that of the ordinary kind which is generally consumed in the country: in which case, should the whole of the increased cost of seed, implements, manure, labour, etc., be classified as cultivation expenses? Or, if additional expenditure is incurred with the object of marketing a commodity in a manner previously decided upon, what part of it should be put under marketing costs? Thus, owing to the overlapping and interdependent nature of the two, it may be difficult to distinguish between them; and border-line cases are always baffling. Moreover, there is no substantial advantage in creating this split: it appears more logical to treat both as one under the broader name of "costs of production." This would also be in conformity with one of the earliest contentions in this book that marketing is intrinsically a part of production. Further, costs are usually referred to in a relative sense: they signify a definite relationship with the ultimate return from the sale of an article. When it is said that the costs of production are high, it is meant that a large part of the price fetched by a certain commodity goes into its production, hence the small net return. Conversely, if higher prices are obtained by the agriculturist for his produce, expenses of cultivation and marketing remaining constant, the net return to him would increase. But, according to our previous discussion, the actual producer in India does not get the higher prices because he cannot hold back his crops for any length of time, and because his resisting and bargaining power is not equal to that of the traders, which amounts to the absence of competitive conditions. Imperfect competition between the cultivators and the buyers of their goods, therefore—and not high costs of marketing as is commonly presumed—is mainly responsible for small net returns to the former. The problem consequently resolves itself into that of strengthening, from

within, the position of the primary producers rather than introducing measures to limit the legitimate operations of the middlemen.

In the same vein it is urged that too many middlemen are functioning these days, and that they make large profits fleecing the peasants thereby. In describing the marketing procedure, it was shown that normally three or four dealers operate between the threshing-floor and the wholesale market. The *beopari*, and sometimes an itinerant middleman also, is indispensable, as he collects the produce from the countryside and takes it to the *mandi*; and the *arhtia* is equally necessary to bring the seller and the buyer together. The *dalal* and a peripatetic dealer may be regarded as of lesser importance, although the mere fact that they are still carrying on their work and have not been eliminated through competition proves that their services are useful and productive. So long as the individual cultivator is ignorant of market intelligence and practice, his produce or marketable surplus remaining small in volume and low in value, and his economic condition and the rural communications being unsatisfactory, the number of middlemen cannot be considered as unduly large. In the absence of relevant information it would be a pure assumption to say that they are earning huge amounts of money. The presence of all these middlemen does not necessarily imply an abundance of profits. They may be getting small returns each, though the total sums going to them as a group may be quite substantial. It is not possible, however, to calculate the total gains made by them as they are scattered over the whole country and do business in varying capacities (as employees, agents, and independent traders); nor will it be correct to cite absolute amounts charged by individuals and call them excessive. Only a comparative study can serve as a fair basis for such conclusions, but the right kind of data is not available. The margin between harvest prices—paid or supposed to be paid in the locality where the produce is grown—and wholesale prices—paid at assembling centres—includes payments for the various marketing functions—e.g. storing, transportation, financing, etc.—to whatever extent they

be performed, and it is generally shared by the producers and the merchants accordingly as they jointly take part in the marketing process.

Nevertheless, in the Lyallpur *mandi* in the Punjab, the *arhtia's* brokerage, besides other small levies or deductions, amounts to Re. 0-12-6 per cent on sale value out of the whole expenditure of Rs. 2-5-6 per cent incurred in disposing of the produce through him; whilst the Co-operative Commission Shop charges only Re. 0-8-6 and Rs. 1-6-3 respectively. The difference evidently is 4 annas and 15-3 annas only on each hundred rupees worth of produce sold, and may appear insignificant, but it shows that the middleman's brokerage and total charges exceed those of the co-operative institution by 47 and 68 per cent respectively, and therefore are positively high. Weaknesses such as these, dealt with in earlier sections, do exist in our marketing system, and efforts should be directed towards remedying them. But there seems to be little justification for blaming the middlemen for all the ills, defects, or shortcomings, and for trying to upset the entire order of things by doing away with them altogether. The rational way of improving the condition of the Indian agriculturists is to remove the handicaps they are suffering from, and not to attack and demolish the marketing structure. A constructive programme aiming at enabling the farmers to become more independent and at organizing the supply with a view to its meeting demand under competitive conditions is needed. No body should possess any prerogatives, nor occupy a dominating position over the others: all should be placed on the same level in fair competition. To achieve this object measures on a comprehensive scale are necessary.

The authorities have, till recent times, been mostly interested in and shown sympathy with the industrial development of the country to the neglect of agriculture. The industrialists and urban classes, being very vocal, have on occasions received a hearing, while the dumb millions from the rural parts have been neglected. It should be emphasized that the provincial governments are responsible for the realization of land revenue, and have frequently

tackled related problems and granted relief to the *ryot*. But all that has been done directly to help him in his profession, and to conduce to an improvement in his economic condition, apart from irrigation works which have been turned into sources of large revenues, has taken the form of small schemes mainly on the cultivation side. There are signs, however, of a change in the outlook of the governments in India. Since the inauguration of the Imperial Council of Agricultural Research—and more visibly during the last five years—proofs are forthcoming that a new and an enlightened agricultural policy is now being adopted. Import duties have been imposed on rice, wheat, and sugar to protect the farmers from foreign competition. The matter of improved communications is being given anxious consideration. Marketing surveys have commenced all over the country, and tangible schemes are expected to follow. Some money has also been provided for the purposes of rural development. Work of rural reconstruction and uplift¹ has recently been started in the provinces. Better milk supply is to be organized; more stud bulls are to be provided; soak pits are to be constructed in the villages; arrangements are to be made for the conservation of manure, etc., etc. No doubt the agricultural departments have succeeded in their work to an appreciable extent, but much more remains to be done. Consequently, and in order to start on a sufficiently broad basis, it is necessary to make far-reaching recommendations. Large expenditure will naturally be involved which cannot be met—leaving the budgets of other departments as they are—from the present revenues either of the Central or Provincial Governments. To accommodate the new heads of expenditure it is necessary, therefore, that a policy of retrenchment should be followed all round. These savings may be supplemented through additional taxation. Another course is to finance the future agricultural programme out of Provincial Development Loans (to be underwritten by the Government of India, if needed). By spreading the fund over a number of years it would be possible to maintain a balance during the whole period of activity. With

¹ See *supra*, p. 78.

the exception of loans for railways and canals, the governments have hardly borrowed for developmental purposes: it is time that the money market was tapped for other productive and beneficial objects as well.¹

I. BETTER FARMING

The whole field has been gone through exhaustively by the Agriculture Commission and the Banking Enquiry Committees, and their findings still hold good. The recommendations made by them still provide the best foundations for future work. The first step in rehabilitating agriculture necessarily lies in the sphere of cultivation. Through increased and improved harvests, the marketable supply will assume greater significance with the *ryot*, and may ultimately lead to the replacement of subsistence by commercial farming. Some people believe that diminishing returns are operating in Indian agriculture. At best it is an assumption, and cannot be easily proved. Judgment in this case should not entirely be based upon the annual out-turn of various crops which may be reduced, for example, by less double cropping owing to the depression. And, so far as the average yields are concerned, the five-yearly figures do not reveal any consistent diminution: the food grains fluctuate, while sugarcane and industrial crops, like jute and cotton, show decided increase in yield per acre.² At the same time, it should be borne in mind that the system of calculating the average yields has been changed more than once since 1892, when a provisional return of the yield per acre of principal crops cultivated in India was first compiled. The statistical methods in vogue are far from satisfactory: the information about the yield per acre is prepared from "the average out-turn on average soil in a year of average character," thus rendering

¹ Signs of a change are, however, noticeable. For example, in September 1936 the United Provinces Government raised a loan of Rs. 2 crores for the following wholly productive capital expenditure: (i) Completion of Hydro-Electric Grid; (ii) Extension of the State Tube-wells Scheme; (iii) Advances to local bodies; and (iv) Advances to cultivators (*taqavi*).

² Vide Quinquennial Reports on the Average Yield per Acre of Principal Crops in India.

the whole basis for computations indefinite and vague. Further, the average yields are fixed on the results of crop-cutting experiments conducted by the district revenue staff, and have been commonly recognized as unreliable.¹ Expert officers of the agricultural departments had been asked, some time back, to undertake such experiments on scientific lines; but, due to insufficient personnel, lack of funds, and other difficulties, the departments in most parts of the country have been unable to discharge the additional duty. The work, therefore, is still entrusted to revenue officials; and, even where experiments are carried out by agricultural officers, the advantage is nullified in the subsequent years because petty revenue officials submit annual variations between the averages worked out for the next quinquennium and the actual conditions each year. In order to avoid a thorough and a detailed enquiry which would be necessitated if the difference between a particular season's calculated and actual average yields were great, the village and *pargana* accountants (*patwaris* and *qanoongos*) try to report as little discrepancy in the two figures as possible, and enter the comparative extent of the crops in round terms of so many annas in the rupee. When the estimates reach the district revenue offices they are cursorily scrutinized, and are forwarded to the provincial headquarters. It is here that the agriculture department takes a hand, and, after determining the provincial averages, sends the data on to the Director-General of Statistics, Government of India. With the yields per acre measured in this irrational manner, it cannot be decided whether they have really increased or decreased. At any rate, more clear and positive evidence will be required to prove that a progressive deterioration of soil is going on in India.

Moreover, according to the theoretical conception, if increasing doses of productive factors result in proportionately less returns, it may be said that the law of diminishing returns has set in. But have additional instalments of labour and capital been given

¹ Vide *A Scheme for an Economic Census of India* (Government of India), 1934, pp. 35-38.

to Indian agriculture? Do the peasants, as a community, put more effort in and spend more money on the cultivation of land now than was done by the preceding generation? The desirability of not treating agriculture on all fours with industry must be stressed upon in this connection. In the latter, all the factors and their working are known and can be regulated in the required manner. Experiments and manufacturing operations can be precisely performed and measured. In agriculture, on the other hand, the elements play a predominant part. Then there is the problem of soil which is open to so many influences. The fertility of a piece of land may be destroyed by soil erosion, and other arable fields may produce less because of continuous cultivation and less fallow. When newly-cleared forest land is put to agricultural use, being full of the natural green manure, it grows bumper crops for the first few years; but gradually, as it loses its reserve of nitrogen, the yield tends to diminish to the level of old land. Besides, sometimes, it may prove remunerative to bring marginal land into cultivation: being inferior, it will obviously produce smaller quantities, and may easily give rise to suspicions referring to the arable land in general. Therefore, while it may be correct to say that the fertility of a particular sown area has gone down, or shows a tendency in that direction, it will not be right to assert that diminishing returns are operating in Indian agriculture as a whole.

(a) *Seeds*.—There are reasons to believe that more intensive cultivation is possible. By transplanting rice, for example, instead of sowing it broadcast, heavier harvests can be reaped. Vast potentialities for improving the agricultural methods also exist. The peasant realizes the advantage of sowing one crop or another, and regulates his activities according to the returns from each, and his own capacity and resources. But he fails to grasp the superiority of one quality over the rest; or, because he does not obtain a due premium for better produce, he does not think it worth while to raise the general level of farming. It is in this channel that the work of the provincial agricultural department should principally be directed. Although a substantial percentage

of crops is grown with improved seed, greater efforts are needed to diffuse the new strains all over the country.

(b) *Implements*.—Not much progress has been achieved in the matter of introducing more efficient implements. Fragmented holdings, the slender means of the cultivators, and the extreme nature of the weather in most parts render the adoption of the modern farm equipment of the West impracticable. The implements suitable for Indian conditions should primarily be cheap. They should also be simple in design, so that the village carpenters and blacksmiths may easily fit and repair them. Lightness in weight is very desirable, as the *ryot* generally manages his field without outside labour, and carries his implements to and from the house every day. The plough ordinarily used has remained unchanged for centuries, and is incapable of deep ploughing, not to mention its inability to invert the soil. Some improved ploughs, e.g. Meston and Scindia ploughs, have been introduced by the agricultural departments; but, low as their prices are, the average peasant cannot afford them. Moreover, these new ploughs have not been advertised enough, and demonstrations have not been systematically given. Lowering of the prices—if necessary, the Government may subsidize the manufacture of improved implements—and greater publicity are essential for the success of an enterprise of this kind. By patient researches and comparison of results between different provinces, it should not prove an impossible task for agricultural engineers to evolve types of implements which will satisfy Indian requirements.

(c) *Fertilizers*.—Another aspect of farm activity which does not seem to have received sufficient attention, so far as can be judged from results, is the matter of suitable fertilizers. The practice of burning as fuel the farmyard manure persists unabated, mainly because of the expense involved in buying wood and coal, and the fact that cow dung, in certain cases, is actually preferred to other fuels. This habit leads to the systematic starvation of the soil, the more so as no substitutes are administered. The average agriculturist usually cannot afford artificial fertilizers, and is not familiar with them. All that can be done in this respect is to appeal

to the common sense of the rural population. The collection of the night soil and village refuse and their conversion into manure, the rotation with green manure crops and the utilization of oil-cakes for this purpose, should be suggested to them with a view to increase the fertility of the land.

(d) *Demonstrations*.—Only by going among the people and demonstrating in their presence and on their fields can the agricultural officers expect to attract the attention of the rural community. Personal efforts should be backed up by holding lectures and taking out exhibition vans. Pamphlets and tracts in the vernaculars, dealing with every-day problems and prepared in simple language, should be distributed. Lantern-slide and cinema shows may be usefully arranged. It would prove more effective if propaganda and demonstration work were organized on a district rather than on the provincial or divisional basis. While the majority of the districts have features in common and the agricultural condition is much the same, the nature of some problems may be dissimilar, and may necessitate a peculiarly local solution. The tours of the demonstration and propaganda sections of the district agriculture office should be confined to a *tahsil* at a time: a halt of a few days may be made in each village; and each should be visited again at intervals. By concentrating on a comparatively small area, a permanent effect can be made; and, even when the work is shifted to other parts, care should be taken to remain in touch with the “reformed” locality so that it may not through neglect lapse into the old ways. So far faith has generally been pinned by the provincial authorities on a few big demonstration farms. They may still be found necessary for carrying on experiments and for growing improved seed, but they cannot be expected to influence the ordinary cultivator to any degree. They are situated at long distances from one another, and a very minor proportion of the population, living in the neighbourhood, comes into direct contact with them. Moreover, the whole atmosphere—organized, disciplined, and prosperous—in these farms raises doubts in the minds of the *ryot* as to whether the new ideas about cultivation born in such an affluent environment can

really be applicable to his circumstances. Once he gets suspicious, no amount of persuasion can be of any avail. Hence, not only should small farms be started at the headquarters of each *tahsil*, but their work should be supplemented by mobile sections going out to the villages and demonstrating under local conditions. This would, of course, necessitate the employing of a much bigger personnel in the agriculture departments than hitherto; but it should be remembered that the inadequate efforts of the past are responsible for the worsening of the situation, and have rendered the reforms overdue.

(e) *Irrigation*.—The timely provision of a sufficient quantity of water for irrigation purposes is of basic importance in agriculture. Although through the construction of canals and railways the chances of famines have been very much lessened, scarcities and sufferings following upon droughts or unfavourable rains are still among the normal course of things in India. Big canal systems are operating in Sind, the Punjab, and the United Provinces, but the dependence on the monsoon can be further reduced if smaller schemes of essentially local character are undertaken either separately in the districts or jointly by a few. The engineers in India have been planning mostly on a provincial scale, and do not appear to have given serious thought to the possibilities of minor works. The monsoon directly helps the cultivation of *kharif* crops only, and the *rabi* crops are watered from wells, ponds, tanks, or canals. The method of drawing water from these sources is as primitive and unsatisfactory as the whole process of cultivation. Cheaper and more efficient alternatives, in the form of lift irrigation by means of tube wells, are needed to replace the present system of bullocks and men drawing bucketfuls of water from *kuchcha* (non-masonry) wells. It may be found that tube-well irrigation is a paying proposition only in the case of valuable commercial crops like sugar-cane and tobacco, and not for ordinary crops. The aim of the agriculture department should therefore be to invent a cheap plant and to give the fullest publicity to it. Through holding demonstrations and explaining the improvements, it should try to convince the people. After that stage has been reached,

co-operative irrigation societies may be formed to install tube wells in common, and thus get over the individual member's inability to afford separate plants, and their failure to obtain full benefit from the wells on account of small and scattered fields.

(f) (i) *Subdivision of Land*.—This leads us to another great factor responsible for the stagnation, even deterioration, of Indian agriculture—the nature of holdings. As mentioned earlier, the land tends to be more and more subdivided and fragmented with each successive generation. According to both the Hindu and Mohammedan laws of inheritance, the property of the deceased is distributed, in various proportions, among all the issues. The effect is that not only is a large agricultural holding prone to be split up into a number of smaller ones, but the survivors are likely to get scattered plots instead of compact fields. This is so because every beneficiary tries to obtain shares in all the holdings owing to their varying values, unless some plots are worth about the same, in which case whole fields may pass on unbroken. Land Alienation Acts have been passed by the Punjab and the United Provinces Legislative Councils to check the transfer of agricultural land to urban creditors. But attempts at amending the laws of succession would be interpreted as interference with religion. Yet a systematic campaign in its favour may create some sympathizers who may at a later stage be able to convert the public opinion and enforce legislation. A difficulty, however, will arise if and when subdivision of land is stopped: in the absence of alternative means of livelihood, a large section of the rural population carries on subsistence farming, and manages to exist from day to day. If the property, in future, is to be inherited by the nearest or the eldest of the kith and kin only, what will the rest of the family do? They may get allowances, but that will not keep them occupied. We have shown above that despite the increased industrial activities in India—involving greater capital outlay and the production of more goods by a larger number of concerns—the total percentage of population employed therein has remained the same, if not gone down slightly, during the first

three decades of the present century. Therefore it seems that to avoid creating an army of landless proletariat, the much-desired reform of the inheritance system will have to be postponed till non-agricultural professions can absorb a more substantial proportion of the population.

(f) (ii) *Fragmentation*.—Further fragmentation can, nevertheless, be stopped without waiting for the cessation of subdivision of land. The religions do not lay down any process for the sharing of the property; hence an act regulating the transfer of land will not injure the susceptibilities of the orthodox. Legal enactments can provide that the agricultural holdings of the deceased should be valued and then distributed in such a manner that the heirs may get their rightful shares—determined in terms of value—but the holdings must pass intact. Compensation in cash, in the form of money interest in the property of the gainer, or in any other way should be allowed to make good the loss to the party receiving inferior land or a smaller acreage. A batch of expert valuers should be provided in each district, and their services made available to applicants on payment of fixed fees. Arbitration boards would be necessary in each village; or, the existing official *panchayats* may be empowered to deal with the partition disputes: appeals from such awards may lie with the district law courts. The function of arbitration can best be performed under the auspices of the co-operative societies, which can combine with it efforts at voluntary consolidation of holdings. Considerable success has been achieved in the Punjab by the Co-operative Consolidation of Holding Societies: in 1934-35, 100,000 fields were reduced to less than 17,000.¹ It is time that other provinces also started experimenting on similar lines. It is needless to point out that intensive propaganda and various methods of persuasion are inseparably bound up with an enterprise of this kind. The support of the leading men of the locality and the neighbourhood as well as of the officials will have to be enlisted to put some influence behind the work of the pioneers.

¹ *Government of India Report on the Progress of Rural Uplift Schemes*, 1936.

2. COMMUNICATIONS

Along with the improvements in cultivation, it is incumbent on the administration to remove the existing handicaps and provide possible facilities to help the agriculturist in marketing his produce where he likes. Convenience and cheapness of transport are conditions precedent on the fulfilment of which will depend, in a great measure, the achievement of that object. We have seen before that water communications play a minor part in Northern India, putting a greater responsibility as well as pressure on the railways and roads. Considering the population and the area of the country, India is ill-provided with means of transport.

(a) *Railways*.—As compared with the European and American railroads, Indian railways—particularly goods and parcel trains—are slow and their rates too high. These are the points that need careful adjustment. They may not have received enough attention in the past, probably because no satisfactory alternative course was open to the people but to carry goods by rail. Now, however, competition has made serious inroads in the passenger earnings of the railways. There is a likelihood that if the goods tariffs of the railways remain as they are, and the lorries and trucks become cheaper, better roads and the development of the motor sense among the people may cause the carriage of goods also in increasing quantities by motor vehicles. The latter, no doubt, cannot be useful in transporting heavy material, but in lighter articles they can prove formidable rivals. The position of the railways should not be strengthened by weakening the other party; but, as the former are subjected to close State supervision and have to follow the various rules and regulations framed for the safety and convenience of the travelling public, it would be unfair if the motor transport is exempted altogether from like control. Necessary restrictions on the road traffic should be imposed by the respective provincial administrations in order to ensure fair competition by means of limiting the number of vehicles on each route, to safeguard the interests of the passengers and railways alike by fixing fares and giving publicity to them, and to provide for regular and

punctual services by the preparing of motor time tables.¹ Instances of cut-throat competition by motor agencies against the railways and among themselves are frequent in all parts of the country, and are not only wasteful but are positively injurious to all interests.

Up to now the regulation of road traffic has been in the hands of the local police: they are entrusted with the examination and registration of vehicles, the testing of applicants for driving licences, the laying down of traffic and of carrying or loading rules, and the prosecution of the wrongdoers. This system is not functioning satisfactorily, as the police are often suspected of favouring some people and victimizing others. Moreover, the combination of licensing and prosecuting duties, like the joint performance of judicial and executive functions by the revenue authorities, is an evil of the first magnitude. The two parts should, therefore, be separated, and special licensing and controlling staff should be appointed under the municipal boards. The universal policy should not be to impose irksome restrictions on the motor transport, but to facilitate transit and to protect all from the unfair practices of the few. And the railways should not be given a monopoly of transport, nor any artificial prop for support: they should be able to meet legitimate competition from the road by employing efficient and economic methods of operation. Further, the creation of a ministry of communications in the Central Government, as recommended by the Acworth Committee,² is essential for the purpose of co-ordinating the activities of the different transport agencies. Under the minister or member-in-charge, a Board should control or regularize, as the occasion may demand, the work of railways, roads, and inland navigation. To the extent that the last two fall within the sphere of the provincial governments, there need not be an interference by the Communications Board, but simply guidance and general unification of policies: The Imperial Council of Agricultural Research presents a working model: without encroaching upon the jurisdictions of the provin-

¹ Rates of fares and the departure hours have since this was written been fixed by the United Provinces Government.

² *Vide Report*, para. 97.

cial agriculture departments, it is rendering useful services. On similar lines, and in order to advise the department on matters of local character, the setting up of an advisory committee is advisable. It is to be regretted that, while a statutory authority is to be created for the Indian Railways, under the Government of India Act, 1935, no provision has been made for the correlation of the various means of communications by a common controlling authority.

(b) *Roads*.—Roads are of growing importance. On account of the frequent equipping and replacing of rolling stock, and due to the building of stations and yards, etc., and their maintenance charges, railways involve large initial as well as annual expenditure; but the roads do not require vast funds once they have been constructed. The railways, nevertheless, bring in revenue to the Government, while the roads do not do so. Unless certain definite schemes for railway extension are examined and their utility and productiveness compared with those of roads that may possibly be built instead, the laying down of a general proposition that roads should be preferred to railways, or *vice versa*, is meaningless. It should be mentioned, however, that owing to increase in motor transport, the old calculations of many railways have been upset. It has even been recommended that a number of railway projects may be dropped, as motor transport has already supplied the want, or because some localities are more suitable for the building of roads.¹ The Chief Commissioner of the Railway Board has also announced that the previous schemes are being gone through again in the light of changed circumstances.² Furthermore, the double and treble stages ordinarily entailed in carrying goods—from the assembly centres to the railway stations by road, then to the destinations by rail, and again to the godowns or markets by road—can be reduced to one journey only if merchandise is transported entirely by road. Therefore road transport deserves equal attention; but its development is being retarded, mostly, by the unsatisfactory condition of the country roads. Roads in

¹ Vide Mitchell and Kirkness *Report*, Appendix L.

² Budget Speech, 1935-36.

the interior—not those connecting the headquarters of the various districts with each other—are either unmetalled or commonly in a delapidated state, being dusty and worn off, or full of bumps and ruts.

Consequently the future line of action should be the universal improvement of the surface of the existing roads, and the laying out of new ones connecting the villages to one another and to markets and towns. These feeder roads should enable the rural population to travel quicker and without much strain to themselves or to the animals, thus encouraging more and longer haulage of the agricultural commodities in a shorter time and without waste. The authorities in charge of the roads in the provinces—public works departments, municipalities, improvement trusts, *taluk* or district boards, etc.—will mutually benefit if they can occasionally hold consultations and prepare their programmes on more uniform basis. Road conferences and road and rail conferences have sometimes been held, but a continuity of policy has seldom resulted. Communication Boards exist in some provinces: one in the United Provinces is not mentioned in the annual administration reports of the Public Works Department of that province, and seems to be more dead than alive. The Punjab Board, however, appears to be active, and distributes road grants to the District Boards; but lack of sufficient finances handicaps its work.¹ Every year a few lakhs of rupees are given to the provinces out of the Central Road Development Fund, but this help does not prove substantial as it meets the construction expenses of only a few miles of metalled roads. A permanent Communications Board, consisting of representatives of the above-mentioned bodies, the railways, and other connected departments or agencies, should be established in each province. It will essentially be of an advisory character, but the Government departments should give due weight to its opinions. Its work should be financed out of loans, as recommended earlier, raised either specifically for the purpose, or as part of the Provincial Development Loan.

¹ P.W.D. (*Buildings and Roads Branch*), *Administration Report*, 1933-34.

3. IMPROVEMENTS IN SELLING CONDITIONS

Half a century ago the Punjab Government¹ drew the attention of the Government of India to the facts that (a) India, specially the Punjab, was exporting increasing quantities of wheat every year; (b) the methods of cultivation were backward, and transportation conditions far from satisfactory; (c) the marketing system was unorganized; and (d) the produce exported was generally adulterated, and it tended to deteriorate owing to the absence of proper storing-places. From the correspondence² that subsequently took place during 1885-90 between the different Governmental departments—both Central and Provincial—railway companies and the European Chambers of Commerce, the following points stand out as evidence of the mentality of the various interests involved. The European business community was almost unanimous in urging upon the Directors of Agriculture the necessity of raising the standard of agricultural production, and of impressing upon the farmers the desirability of selling pure and unmixed grain. The officers retorted that as the defects in the quality of the produce were due to the practice of the exporters of fixing the limits of refraction (i.e. percentage of impurities) high, the remedy lay with the latter and not with the growers. They further explained that by keeping the minimum of refraction comparatively high, i.e. at 5 to 7 per cent, the dealers in general, and those at the ports in particular, stood to gain. Under the then existing custom, if the peasant sold clean or less adulterated produce he got a price calculated from that prevailing in Calcutta, Bombay, or Karachi, where the standard of refraction was permanently fixed irrespective of the actual nature of the commodity: thus the cultivator did not gain by supplying purer grain. The up-country dealer would purposely mix sand or earth to bring the produce down to the level expected for export trade, and thereby derive an unearned profit. If the *arhtia* failed to lower the standard deliberately, the exporter did it, and benefited. Knowing that

¹ Resolution No. 95, dated March 19, 1885.

² British Parliamentary Papers, East India, C. 7440, 1894.

he would not get a premium, the *ryot* would obviously not make any effort to improve the quality: it would be against his interests to do so. It was therefore suggested that the trade should allow a smaller amount of refraction, i.e. 1 or 2 per cent only, in formulating the basis for the fixation of prices per unit: and that, as supply always followed demand, if cleaner grain was wanted, and prices higher than those paid for dirty and mixed qualities were offered, the necessary improvements would automatically follow. The Chambers announced their inability to reform the established practice because the commercial associations in England did not agree to any change.

(a) *Standardization*.—The worst feature in the Indian exports of wheat was that the quality and, hence, the final value of a consignment to London was determined there and not in India, as it ought to have been. Despite her large exports, India was treated in a manner inferior to that of the other chief exporters, e.g. Australia, U.S.A., etc., where the quality of wheat was settled for both sellers and buyers in the country of origin. Consequently, it was recommended by some observers that legislation should be introduced in India, making it illegal to deal in adulterated agricultural produce. A few keen minds¹ pointed out that the up-country traders wanted something more independent in the matter of refraction and classification than the system of arbitration by the exporters in vogue at that time. The remedy put forward was that an authority, consisting of mercantile men and an expert appointed by Government, should be created which would be a sufficient guarantee to all parties and restore confidence. But, whenever such proposals have been made, the European merchants in India have protested in the strongest terms that it would amount to an interference with the trade, and that the State should not legislate on such matters. The governments have gladly maintained their neutrality and let things drift. Fifty years have passed since the above correspondence took place, and no standards or grades are fixed by the authorities, notwithstanding the

¹ Note by the Director of Land Records and Agriculture, North-Western Province, and Oudh, dated January 14, 1887.

recommendations of various committees of enquiry, and in spite of the fact that so many other countries have incorporated this function under State duties. In 1927, when the British Government began to advocate the adoption of improved methods of marketing agricultural produce and encouraged private initiative, and later came forward to render direct help, they chose for their campaign a slogan which is of greater importance to India to-day than it ever was to Britain. That slogan was "Standardize, Organize, and advertise." In previous discussions we have brought out the extent of standardization and grading—or the absence of it—prevalent in India. These tasks would be very much simplified in the future if better farming became universal. The mixed quality, which is a common feature of the agricultural produce at present, would tend to disappear with the mass introduction of improved seed; and, under satisfactory conditions of cultivation, a permanency would be imparted to the various new types. But with a view to enforce the trade adhering to some fixed standards the Government should first lay down definite principles for the classification of the commodities. This may be applied, initially, at seaports on the exports of agricultural articles.

The grades of cotton are already well determined and not much work except supervision will be involved therein. Complaints are, however, made from time to time about the standards of jute, and suggestions in that respect have been advanced in the last chapter. Strenuous efforts, no doubt, will be needed to fix standards for wheat and oilseeds. In the case of the former an objection may be raised that it now hardly enters our overseas trade, and that it would be of little use to devote any attention to it. But it should be pointed out that the absence of fixed standards was one of the causes of India's losing her position as one of the world's exporters of wheat. As the unification of prices all over India has been achieved since the opening of the railway the market quotations at ports directly affect the prices prevailing in the interior of the country. If, therefore, the offers at Calcutta, Bombay, and Karachi are higher for certain grades, the tone of

those qualities would improve in the wholesale *mandis* as well. Besides, Karachi ships large quantities of wheat to Calcutta: so, when grades are fixed at the former place, they would not only influence the supplies and prices there, but would also affect the conditions at the latter town, and have reaction in growing parts. After the grades have been fixed by the public authorities, one common staff of inspectors will suffice to examine the consignments of all the produce. A system of national marks, as operating in Great Britain, may also be adopted. The uniform quality resulting from these measures will, in all likelihood, fetch higher prices in foreign markets; and the exporters, who will in the beginning perform the function of grading, will be the main gainers. When the middlemen and, ultimately, the producers become informed of the premium to be obtained in this manner and realize the value of standardization, they also may co-operate and benefit thereby. At a later date, and in the light of experience, wholesale markets, where the dealings are relatively organized owing to the presence of *dalals* and *arhtias*, may also be brought in line with the port towns, and the particular official grades enforced.

(c) *Organization*.—The twentieth century is essentially an age of "big business." In the industrial spheres, cartels, pools, trusts, corporations, and combinations have superseded, to a great extent, the individual enterprises of the past. Large-scale agriculture had—until the revival of economic nationalism—made the newer countries the granaries of the world, the selling function being undertaken by the Wheat Pools in Canada, and the Elevator Systems in the United States. In India the cultivators are unorganized, and their dealings with one another and with the outsiders are of an individual character. The potentialities of the co-operative movement will be discussed in a later chapter, but we would like to emphasize here the urgency of a united front. The growers are not in touch with the customers: they are not acquainted with the changes in demand, and may go on producing commodities which have small markets. The cultivation expenses of the grower are raised by the small scale on which he operates, and it may be

possible to effect economies through working together. In selling the produce, the same tendency is apparent: either many agriculturists with meagre supplies try to reach the big markets and involve themselves in unequal amounts of labour and expense, or a large number stay at home, leaving the marketing functions to others, and are content with low returns. Both cases result in loss for the producers, and it can be obviated only by organized efforts on their part.

(c) Advertising.—A great selling force which is not utilized by the Indian farmers owing to lack of cohesion in their enterprise is that of advertising. So far no thought has been given to encourage the sales of agricultural commodities by means of advertisements within the country. There may be a certain amount of scepticism or even cynicism about advertising wheat, rice, etc., among the Indian population; but a judicious and scientific publicity campaign on behalf of a genuine article seldom fails in creating greater demand. Take, for instance, the growth of tea consumption in India. A generation ago tea drinking was in its infancy, if not unknown. The people regarded it as useless, wasteful, and injurious. At best it was a luxury. The Tea Association carried on their propaganda in diverse ways: handbills and posters were issued by millions; advertisements were inserted in the papers in all languages; free samples were distributed broadcast; free tea stalls were opened in fairs and other popular gatherings, and lantern-slide shows extolling the benefits of tea drinking were widely organized. These campaigns were arranged throughout the length and breadth of the country, and are being intensified with the passing of time. The work of the Association was rewarded inasmuch as an important section developed a taste for tea, and every year the number of habitual drinkers is increasing. If this could be done for an article which can only be called a conventional necessity, though formerly it was regarded as a luxury, it should certainly be possible to encourage the consumption of wheat, white sugar, dairy products, vegetables, and fruits, etc. The producers are not in a position to finance this work; therefore, in order to improve the diet and to increase the consumption of

wheat, advertisements, etc., might be undertaken by the Government. If, however, it is desired to promote overseas sales, then the exporters might advertise. The precise method of publicity will, naturally, depend on the commodity in view, the class of people to whom it is expected to appeal, the funds provided for the purpose, and so on. In the foreign markets, Indian products are little advertised, and their good points seldom brought to the notice of the public. Even if some people remain unconvinced about the utility of advertising at home, there should not be any doubt as to its necessity abroad. Europe and America have perfected the art of advertising, and employ it extensively in national and international commerce. They can, in turn, be reached and impressed by intensive propaganda only. With the establishment of standards and grades, it should prove advantageous to give full publicity to such commodities, at least in those countries which are our principal customers. This step is desirable if only to disabuse the minds of foreign buyers about the quality of our goods. The three Indian Trade Commissioners in Europe—at London, Hamburg, and Milan—given sufficient funds and authority, should be able to cover the whole of the Continent, but additional officers in the Near East, Japan, and the United States are needed to further India's trade and commerce.¹

(d) Standard Weights and Measures.—Describing the present state of Indian weights in a previous chapter, it was shown that they vary from province to province, within the same territory, and between different trades and commodities. The variations are so great that, if local conditions are given undue prominence and many exceptions made or latitude granted, the reform, already suggested, will prove abortive in effect. While the prevailing practices should be taken into consideration, the underlying idea all along should be to adopt uniform weights and measures for the whole country. For the first few years it will be an uphill task to have the new ones introduced, and to see that they, and none other, are universally used. In five years, probably, the old weights

¹ The Government of India have now decided to appoint Indian Trade Commissioners to Japan and East Africa.

would disappear and be forgotten, and a big staff will no longer be required. In the beginning, however, a regular cadre of Inspectors should be created to attend the market places to inspect the shops, and to prosecute the offenders. The Bengal Jute Enquiry Committee has expressed the opinion that such a staff can remain busy only for a few months in the year, when jute is being marketed, and that for the rest of the time it will have little work to do.¹ This difficulty can be overcome if our recommendations—*re* extensive demonstration work by the agriculture departments—are accepted. They will necessitate a considerable enlargement of the agriculture services, and the same staff can advise on cultivation problems during the sowing and growing periods, and inspect the weights after the harvesting of the crops when sales commence. Some checking of the weights should be continuously performed the whole year round and, to that extent, the double duties may be simultaneously discharged by the agriculture inspectors. No intensive training would be needed to equip a man for the purpose of checking weights and measures, and enough knowledge could easily be imparted in the existing agriculture schools and colleges.

4. ABOLITION OF OCTROI DUTIES AND TERMINAL TAXES

While examining the marketing expenses of the sellers, we drew attention to the inequity of the octroi duties and terminal taxes and the hardships involved therein. It was therefore suggested that they should be abolished and, in towns mainly important for residential purposes, direct taxes on property, professions, or trade take their place. The assessments for taxation purposes by local bodies in Northern India cannot be regarded as perfect. Considerations of leniency and favour, if not ulterior motives, are often present in determining the taxable capacity of the people. If the rules are made more strict, and their application stiffened and rendered impartial, the income of the municipal and district boards will show an appreciable increase. Further, if the citizens are educated in their responsibilities, and civic sense and pride are developed by those institutions, the collection of taxes should

prove easier. The local taxes occupy an advantageous position as compared with the Provincial or Central taxes. Income tax, for example, is realized over such a large area that the assesses do not see tangible proofs of the expenditure financed out of its proceeds. In the case of municipal taxes, on the other hand, on account of smaller areas of jurisdiction and the consequent closer contact between the taxing authorities and the taxpayers, material evidence of the utilization of the funds for the public weal—in the form of schools, hospitals, dispensaries, roads, etc.—comes to the notice of the population. The local self-governing units would benefit themselves, and would do a good turn to the electorates by organizing meetings, arranging lectures and exhibitions, advertising the amenities of their towns and, in general, enlightening popular opinion. Their task will be very much simplified if they have educated the voters and taken them into their confidence.

For the towns which have gained prominence essentially as business centres and not as residential places, we have recommended taxes on the stored produce or, on futures, transactions instead. The rates would be too low to hit the trade to any extent, and could always be varied to suit the peculiar conditions of different markets. Resolutions by the provincial governments—even legislative enactments may be necessary—declaring octrois and terminal taxes improper, and indicating the possible and alternative substitutes, should achieve the desired end and ensure uniformity. The setting up of regulated markets, recommended in the next chapter, will make the collection of the new taxes easier. We have also, previously, emphasized the need for State supervision of the hedging transactions, as at present they contain many defects. Inspectors of the agriculture departments, specially appointed for this work, may sit on the Futures Committee of each market and look after the interests of the growers, who may have no representatives of their own. Although the inspectors will not collect the taxes, which will be done by the individual Futures Committee on a commission basis and handed over to the municipalities, yet their presence on the spot and readiness

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to co-operate with the local boards will be sufficient safeguard from the point of view of the latter.

5. MARKET INTELLIGENCE

Attention has on repeated occasions been drawn to the faulty nature of Indian statistics. The Agriculture Commission criticized the method of compiling agricultural statistics, and the Bengal Jute Enquiry Committee pointed out how the periodical forecasts of jute were greatly exceeded by the actual outturn.¹ Messrs. Bowley and Robertson have recently exposed the arbitrary and archaic bases used for preparing the "Estimates of Area and Yield," and other official data. Dealing with the contemporary general index numbers of wholesale prices which they consider "... undoubtedly unsuitable for the purpose," they say, "the figures are expressed as percentages of the year 1873, the list of commodities has not been revised since 1891 (so far as we could ascertain), and includes indigo and other commodities no longer of importance, and it is unweighted."² No records of annual stocks are prepared, nor any statistics on the subject of marketing maintained. It is not known how many commodity markets are functioning at present. Between the village *mandis* and the wholesale organized markets at a few commercial centres, transactions in grain are carried on in hundreds of other marts in Northern India: then there are *bazaars* in all towns and cities. But no classified list or details about the business done there being available, statistics pertaining to inter-district trade are lacking; and the greatest tragedy is that the information when ready does not reach the cultivators. They are not aware of the total stocks carried over from the previous years, or of the probable production in the current season. No idea can be formed by them of the approximate demand or the likely trend of the prices. This state of affairs is, in a great measure, the result of illiteracy; but all possible means should be adopted to see that the growers do not remain ignorant of the conditions affecting their products.

¹ Vide *Majority Report*, pars. 25-27.

² Vide *Scheme for an Economic Census*, p. 44.

The establishment of separate bureaus of agricultural statistics in each provincial department of agriculture is necessary. The field staff, and some special enumerators and compilers, if needed, should be entrusted with the work of supplying information from rural areas: the co-operation of local boards should also be sought. Too much dependence has been put in the past on the officials of the revenue departments, and it is time that agricultural statistics be placed on a separate footing. The provincial figures, to be tabulated by each agricultural department, should subsequently be forwarded to the Imperial Council of Agricultural Research for incorporation in the all-India agricultural statistics. Here again too much reliance has been placed on the Indian Commercial Intelligence Office. By transferring this work to the Agricultural Council, pressure upon the Director-General of Statistics, Government of India, will be relieved, and he will be left to devote his whole attention to non-agricultural statistics and to matters of general interest.

Short statements or pamphlets setting out the local and national prospects of the various agricultural commodities with reference to the demand, supply, and price aspects, may be distributed among the villagers at specified intervals. The number of educated persons is undoubtedly small, but the contents will be of such vital importance for the rural population that the few literates will succeed in spreading the news among the rest. Posters with relevant information should be displayed prominently in all markets, and outside the dispensaries, cattle-pounds, schools, police stations, law courts, and other public and (with permission) main private buildings. The institution of regulated markets will facilitate the work of imparting marketing intelligence, and so will improved communications. The majority of the agriculturists may not even then take their produce to the big *mandis*, and may choose to sell in the villages, but the public announcement of the prices and the convenience in transport would induce the buyers to offer better rates in the countryside also. The officers of the revenue and agriculture departments, during their tours, should make enquiries as to whether the news service is operating

well, and may ask for suggestions from the people. By these diverse methods the results of the researches and experiments of the botanists and zoologists, entymologists and chemists, and engineer and economists alike could be carried to the very door of the farmer. Through intensive and extensive publicity and demonstration alone can some impression be created on that fatalist mind.

CHAPTER X

FUTURE PROGRAMME

IN times of adversity, or when trenchant criticism is levelled against prevalent practices, the universal tendency of those at the helm of affairs is to adopt a conciliatory attitude and make concessions. Instead of introducing far-reaching measures which may be expected to improve the whole economic machine, superficial adjustments are carried out. These palliatives serve to calm public opinion for the time being. A short-term policy may meet a particular emergency; but when it is put to a severe test later on it cracks under the pressure. Once more the necessary patch-work is undertaken, and the normal functions are resumed.

With a view to guard against this danger, we suggest that all the aspects of the Indian agrarian system should receive due and simultaneous consideration. The agricultural problems are inter-dependent, and progress in one direction should help advancement in others. There is a great probability that well-directed efforts of the Government, founded on a liberal programme, may succeed in enlisting the warm support of thinking Indians, and, between them, in developing agriculture within a reasonable number of years. We are anxious that the new era that seems to be commencing should be as thorough and broad-based as the circumstances require. The points put forward in the last chapter—viz. the improvements in cultivation, the standardization and grading of produce, the imposition of uniformity in weights and measures, and the development of communications—will not go far if they are not supplemented by more comprehensive schemes. As agriculture is a provincial subject for administrative purposes, and as the local governments—being in closer contact with the governed—can prove more useful in this connection, it will be proper if provincial rather than central legislation is adopted. The Central authorities, however, through the Imperial Council of Agricultural Research, should try to maintain general uniformity

between the actions taken by the different units of the country. Conferences should be convened from time to time to afford opportunities to representatives from all parts to exchange the respective points of view. But where identical policy is deemed necessary the Government of India may intervene and introduce measures applicable to all.

I. VILLAGE GODOWNS

The unsatisfactory nature of storage accommodation in the villages has been fully discussed above. The provision of adequate and sound storage facilities, therefore, becomes a matter of paramount importance. Its urgency will tend to increase as larger and more specialized crops are harvested, and their quality is improved. But here we should take into account the present mentality of the *ryot*. It has been mentioned at different stages of this study that he carries on his work on an individualistic basis: from the purchasing of his requirements to the sale of the produce, it is essentially a one-man show. In keeping with this procedure, on account of diversity in the quality of the produce and owing to the general narrow outlook of life, the average cultivator may not appear to be favourably disposed towards mixing his crops with those of others in common storage. But, in the absence of definite proof, it is not fair to conclude, as was done by the Agriculture Commission,¹ that he will disapprove this innovation even when he may be expected to gain. Attempts at joint marketing in Northern India have, up to now, been confined to a few sale societies in Bengal and commission shops in the Punjab. They are situated at central places and in prominent *mandis*—not in the villages near the threshing floors—and do not always provide sufficient or good storage. These co-operative agencies do not possess much experience of collective storing, and we cannot depend upon them for the relevant information.

In order to encourage the holding of produce by the agriculturists for longer terms, a number of cheap—but rat and

¹ Vide *Report*, p. 404.

damp proof—godowns should be built in the villages. The agriculture or co-operative department (or both) should, after preliminary surveys, select certain neighbouring localities which possess homogenous characters. For the purpose of financing these experiments, the Government of the province might lend funds free of interest to the department concerned. The Government engineers should supervise the construction of the godowns, which, when completed, should be entrusted to the village co-operative societies or associations (dealt with in the next chapter) for management. These institutions will charge certain fees or commission for their services, and out of this income they will meet the costs of establishments and pay rent to the Government for the godowns. Instead of keeping the produce of each peasant separate from the rest, it should be stored as one. Generally the quality does not vary by large margins, and the mixing together will not lower the prices offered. If, however, better grades begin to come in appreciable quantities, separate arrangements will have to be made for them; and, subsequently, when they fetch higher prices it will prove an incentive for the whole community to improve the crops. It cannot be denied that many difficulties will be encountered in the course of this enterprise; and the only weapon to fight them is propaganda and sympathetic guidance.

2. LICENSED WAREHOUSES

The case for the establishment of public warehouses in the whole-sale *mandis* and towns is more hopeful. We have described previously the methods of storage current there, and we drew attention to the fact that the storing places—*khattis*, *kothas*, and *golas*—are not satisfactorily constructed, with the result that the produce deposited is open to damage in diverse ways. We also pointed out that when they advance loans to the merchants, the joint-stock banks place their own signboards on the pits or the buildings to show that the commodities stored inside are hypothecated to them: this step is regarded as derogatory by the traders, who, consequently, do not freely avail themselves of the financing

facilities provided by the banks. Efficient storage¹ should, normally, involve the provision of sufficient accommodation for the goods marketed at a particular place. Secondly, since the interests of the banks and other financiers lie in the merchandise being maintained in good condition, the warehouses should through the right type of construction be able to safeguard the quality of the produce. Further, the paper giving title to the stored commodities needs careful and impartial preparation: the goods should be inspected on arrival, and the information about their state incorporated in the warehouse receipt. The owners of the warehouses and the management should be of unimpeachable character and high integrity so as to inspire confidence among the dealers and bankers alike. These features are either totally missing, or are found in a minor degree only, in the existing storage system of Northern India. Need for well-built independent warehouses, licensed by the Government, is being keenly felt; but because few people possess any knowledge about their working, and still less have the necessary experience, no private enterprise is forthcoming.

The Punjab Government in its resolution,² dated March 19, 1885, had emphasized the need of storage for wheat, and had favoured the establishment of warehouses by the respective railway systems at important stations on their lines. The matter was discussed at great length, but the various provincial administrations failed to agree on the necessity of providing storing accommodation in that manner. The mercantile communities were not unanimous on the solution, although most of them admitted that many benefits could accrue from such institutions. The railways, while generally appreciating the possible advantages of the warehouses, did not think that the creation and maintenance of the same fell within their duties. In the light of these divergent views, and on receiving the information that some warehouses had been completed and others were being built by a few local and municipal authorities and the railways in the Punjab, the

¹ *Marketing Agricultural Products*, Clarke and Weld, op. cit., pp. 209-214.

² British Parliamentary Papers, C. 7440, 1894.

Government of that province in a report to the Government of India, dated December 23, 1886, expressed their satisfaction that a commencement had been made in the desired direction, and opined that nothing more appeared feasible at the time. The new era hailed by the Punjab Government proved to be an illusion, and no network of modern warehouses, as visualized by it in 1885, came into being. The whole question had been lost in the labyrinths of official resolutions and despatches. The original communication of the Punjab Government covered all the aspects of wheat, including its cultivation, preparation for and transportation to the markets, storage, sale, carriage to the ports, and the ultimate exports. The Government of India circulated it in the original without comment, and without asking for replies on definite points, and the numerous smaller authorities did the same. The result was that one official or business concern dealt with this point, a second with that, and the third with others: they laid emphasis where they thought it was necessary. In the midst of so many opinions, propounding all sorts of views, a sense of proportion disappeared. The initial proposal was for the establishment of warehouses by the railways for the purpose of storing wheat which was mainly grown in the Punjab and the United Provinces. Therefore the rest of India, except the port towns, was not directly involved, and need not have been consulted. The Central, the Punjab, and the United Provinces Governments and the railways passing through the two provinces were primarily concerned, and should have met in a committee to discuss the suggestions. Moreover, it seems that, by 1886, the Punjab authorities had changed front, or, at least, very much modified their conclusions. On the receipt of the correspondence expressing the dissentient views of other administrations, the Punjab did not try to convince the Government of India of the soundness of its own recommendations, not did it make any effort to convert the sister provinces. Even if the Punjab was satisfied that progress was being made, there was all the more reason for regularizing the work and ensuring full development in the future by passing an act of legislature. Possibly, however, the Government simply

wanted to draw the attention of the people towards this matter, and, not having any scheme of its own, assumed an air of contentment when that vague and unprovoking object was achieved.

Impressed with the immense potentialities, the Central Banking Enquiry Committee¹ recommended that the State should grant certain concessions in order to encourage the setting up of such warehouses. The draft bill of the late Mr. B. F. Madon, commended by the above body to the Governments in India, followed broadly the system obtaining in the United States. While generally agreeing with the provisions of the bill, the United Provinces Banking Committee² further adopted the proposal of one of its members,³ that the warehouseman should not be permitted to do any business, either directly or indirectly, on the basis of goods he received for safe keeping: his sole interest should be limited to the management of the warehouse. This was obviously designed to remove a temptation from the path of the warehouseman. The main advantages that a chain of warehouses offers are that they will undertake the cleaning and grading of the products, thus increasing their market value. The stored goods could be delivered to any person who presented the warehouse receipt, containing full details regarding them, and who met certain liabilities. The receipt should be made a document of title, like a bill of lading, thereby increasing the financing possibilities of the agricultural commodities. As each warehouse would be licensed and subjected to inspection by Government officials, and as grading would be done by a certified grader, complete reliance could be placed by the banks on the warehouse receipts; and it would no longer be necessary for them to take individual precautions as they do at present. Moreover, because the contents of the warehouses would be insured against loss by fire, theft, and damage, the risk to the creditors in lending on the security of goods so deposited would be reduced to the minimum. The Government, by guaranteeing some return, can encourage private initiative to set up warehouses

¹ *Vide Report*, vol. i, op. cit., pp. 232-238.

² *Ibid.*, vol. i, p. 164.

³ *Vide Evidence*, vol. ii, pp. 89-91 (Mr. B. T. Thakur).

in the wholesale markets, where the practice of storing is already common, and borrowing on the security of stored produce is frequent: so the licensed warehouses will not, after all, entail a great departure from the contemporary methods. It will merely amount to an improvement, and its ultimate success can never be doubted. In these circumstances, the financial aid by the State will not have to be continued for long, and very soon commercial interests will take to it in right earnest.

3. GRAIN ELEVATORS

(i) *American System*.—While the public warehouses in the United States, licensed by the Department of Agriculture under the provisions of the Federal Warehouse Act, 1916—which is permissive legislation—serve extensively for the storing of all sorts of agricultural and farm products, grain or wheat elevators are also commonly found in the States and Canada. The warehouses are established solely for the purpose of receiving goods for safe deposit—cleaning and grading being done as an integral part—but the elevators perform other functions besides. “Elevators are buildings adapted to handling grain in bulk. They are equipped with an endless belt of scoops which carry the grain to the top of the building from where it is distributed to the various storage bins.”¹ The local elevators in North America are chiefly of three kinds: (1) the line elevators, set up in a chain and owned by large companies with headquarters in produce markets; (2) the independent elevators run by private individuals; and (3) the farmers’ elevators, generally managed on full or quasi-co-operative basis.² Apart from the private ones which are used exclusively by farmers for their own grain, the whole system consists of three main classes of public elevators, named according to their location and function. The most numerous, and from the point of view of marketing the most important, are the country elevators in which grain is received directly from the farmers.

¹ Converse, *op. cit.*, p. 179.

² *Report on the Marketing of Wheat, Barley, and Oats in England and Wales*, 1928, pp. 66–72.

It is transported from there to the terminal elevators, which are established in large towns and at principal commercial places, are much bigger than the country elevators, and are designed to control the movement of grain through central markets. Lastly, there are the port elevators on the seaboard, where the supplies are received from the interior and shipped overseas. They are naturally fewest in number, but have the greatest capacity.

Originally the terminal elevators' main work was that of unloading, elevation, and loading of grain. As they are situated at points well served by the various transport agencies, the above-mentioned still form some of their important functions. Conditioning of the grain—involving cleaning, cooling, drying, etc., in short, a general treatment for heat or dampness—mixing and grading are also performed. But an elevator company is, primarily, a grain merchant, and discharges complementary duties because they are necessary for the physical handling of its goods. It acts as a wholesale distributor of grain, buying in car loads from the country points either directly by bids or indirectly through purchasing in the produce exchange; and it hedges against its purchases in the futures markets.¹ Many chain and individual elevators are also controlled by flour-mills in the ordinary course of their business. When a farmer delivers grain to a public country elevator, he may dispose of it for cash to the elevator, or he may store it to be sold or shipped out at some future date. But, "Unless the elevator belongs to a pool, the manager ordinarily buys the farmer's grain for cash after weighing and grading it."² Thus the normal policy of the elevators is to buy up the produce and sell it on their own behalf, and not merely to act as agents in the marketing procedure. Only the co-operative elevators, members of different "Pools," operate in the interests of their patrons, and return the profits to the latter either by charging lower commission, paying higher prices, or granting bonuses. The co-operative line-elevator movement in Canada has gradually led to the formation of Wheat Pools with their price-control policy.

¹ Hoffman, *Future Trading*, pp. 70-75.

² *Report on Marketing*, p. 67.

(ii) *Indian Schemes*.—During the correspondence of 1885–90 reference was made by some persons in India to the American grain elevator systems; and in 1889 the Secretary of State forwarded to the Government of India, for their favourable consideration, a tentative scheme drawn up by Mr. James G. Smith, of the firm of Messrs. Ritchie, Stewart & Co., Bombay, for the introduction of grain elevators in India.¹ The originator of the proposal pointed out the prevalent defects in the handling and marketing of grain in India, described the advantages of bulk handling, cleaning, and grading, and emphasized the subsequent greater competitive strength of Indian wheat in foreign markets. While showing the benefits that the producers, traders, and the Government could expect from the improved practice, he sketched the main lines on which he intended to proceed. He offered to float a public company for the purpose, and required certain concessions. These included: (a) arrangements for the counter-signature of grain certificates by Government officials; (b) free provision of land; (c) monopolistic rights for twenty-five years; (d) guaranteed interest for the first five years, etc. About a dozen trading rights were also stipulated for, for example: (1) to erect elevators and provide for cleaning, grading, and storage of wheat; (2) to levy charges, as authorized by the Government, for the services rendered; (3) to act as agents for producers and merchants; (4) to advance money against grain held in the elevators, and to *ryots* on the security of their land, crops, etc.; (5) to act generally as warehousemen, forwarders, shippers, and agents in matters connected with the Indian grain trade, etc., The rights asked for were, of course, to depend upon the basis upon which the company started their business. The promoters, however, undertook not to act, under any circumstances, as merchants or owners of grain. It may be pointed out that these rights were of a general character, and could be enjoyed by any trader or concern without necessitating their special conferment by the authorities: they did not amount to privileges of any sort.

¹ From Lord Cross to the Government of India, No. 116, dated November 28, 1889.

The Government of India, in due course, circularized the provinces and the railway companies. The replies¹ given by them and by the European business community, though not agreed on all points, revealed a remarkable degree of opposition to the scheme of Mr. Smith. The Agriculture Departments held that the existing methods were peculiarly suited to Indian conditions. And they deprecated the idea of their officers taking any responsibility in the work of grading and warehousing unless the latter had full control over it. The railways were not prepared to give their land free of cost, and wanted to treat the elevators of the future like all other customers. Lastly, the commercial associations did not favour the granting of the monopoly or the guaranteeing of interest. Ultimately, the Government of India informed the Secretary of State that, although proposals had been made from time to time to legislate in order to ensure the purity of exported wheat, the mercantile groups were averse to measures of this kind: and the Government, therefore, did not think that the situation necessitated any interference on its part.² It expressed doubts as to whether the dealers in India would appreciate the benefits of public warehousing, and, therefore, concluded by saying that it was not prepared to subsidize a company for the cleaning, grading, and storing of wheat, and that the promotion of such a system must be left to private enterprise. The matter ended at that.

Later, however, a grain elevator was erected at Lyallpur by the Punjab Government, and it started receiving wheat from the public in June 1920. It cost Rs. 7 lakhs in all, and had a capacity of storing about 100,000 maunds of grain. Messrs. Clements, Robson & Co. were entrusted with the task of running it for the Government for a sum of about Rs. 16,200 per annum.³ From the very beginning, and from sundry quarters, doubts were being expressed over the possibilities of its ultimate success. It seems

¹ Vide the British Parliamentary Papers, Cmd. 7441, 1894.

² Resolution, the Revenue and Agriculture Department, No. 39, October 20, 1893.

³ Vide *Annual Report of the Department of Agriculture, 1922-23* (Punjab).

that the people did not take to it enthusiastically, and little use was made of the elevator. Unfortunately the commencement of its operations coincided with a period of low exports of wheat, so that the largest quantity ever stored in the elevator amounted to 30,000 maunds of wheat only during the year 1922-23. The owners of wheat could not gain merely through storing there: the services of an elevator can be profitably employed only in the event of exports. It had been worked for six seasons when the Director of Agriculture noted the fact that, as little use had been made of the elevator, the experiment did not appear to have been successful, and gave an indication that it might be leased to the Military Department.¹ Since then no mention of the elevator has been made in the administration reports, and it was permanently closed down soon after. Many causes contributed towards the failure of the Lyallpur grain elevator: primarily, an isolated attempt on the part of the Punjab to raise the level of the wheat market was unjustified. The United Provinces were also exporting appreciable quantities, and their co-operation was necessary.

Even if the intention was to improve the standard of the provincial wheat alone, a single elevator could not cover the whole land of the five rivers; a chain of country, terminal, and port elevators would have had a fair chance of success. Lyallpur might have been well situated from the production point of view, yet it was neither the shortest nor the only route from the Punjab to Karachi. So it could not have been hoped that wheat from all the districts would be brought especially to the elevator before being despatched to the port. How could one plant better the quality of the grain of the whole province? Wheat from other parts still being marketed in the old fashion, the elevator wheat had to be shipped separately; but because regular consignments were not exported in sufficient quantities, no permanent demand could be established for the improved wheat in importing countries. Moreover, so long as the terms of refraction for Indian wheat were not changed in London, no premium could be obtained for cleaner grain: thus the incentive on the part of the suppliers

¹ Vide *Annual Report of the Department of Agriculture, Punjab, 1925*.

to market uniform and unadulterated goods was lacking. Under these circumstances, if wheat was sent from the Punjab after the removal of all extraneous matter, foreign elements would have been deliberately introduced into it *en route* to England, as the exporters would not have received higher prices for the superior grades. Further, because steady and large amounts were not being despatched by the elevator, the railway management did not provide wagons suitable for carrying loose grain. Hence one of the main planks of the elevator system—bulk-handling—was knocked off: the much-advertised economy proved inapplicable in this instance.

Besides, there was one feature in the Lyallpur elevator which was bound to prove prejudicial to its successful operation. It has been mentioned above that the elevator was worked by a firm of European grain dealers for the Government. Without questioning the motives of the authorities, and without casting aspersions on the management, it may be pointed out that a great tactical mistake was committed in arriving at this decision. The firm was widely known to be actively trading in wheat; therefore doubts could very easily arise in the minds of the local farmers and merchants as to the extent of impartiality possible in grading the produce. The Indian agriculturists and small business men, being inclined towards unnecessary secretiveness in their transactions, the knowledge that some big dealers were entrusted with the task of running it must have stopped the enterprising people from trying the elevator. Instead of doing everything to avoid creating suspicions among the would-be customers, a policy with the opposite effects was adopted. Age-long traditions and customs had first to be broken down before common storage could have been universally introduced, and the utmost assurances and proof would have been needed to allay the natural fears of those who were thinking of trying the experiment. When a few bold spirits did take their wheat to the elevator, some discontent and grumbling must have followed as the result of grading. They may have regarded it of a superior quality, and consequently felt disappointed when the official assaying test belied their hopes. That would have deterred many others from going to the elevator; and more must have been

scared from it when a rumour—right or wrong, intentional or otherwise—went round that the management was purposely lowering the grades of the wheat belonging to the public in order to place its own supply on a higher level in the estimation of the exporters at Karachi, or the importers in Europe, and that it was thus making undue profits at the expense of the Punjab people. The writer found that the dealers at Lyallpur all along believed that the elevator was run by the European firm in its own interests, having been obtained from the Government on a lease. He was actually asked by some of them that, when a concern was trading in certain goods, was it not to its advantage to establish their superiority and to beat the produce of the competitors? On being questioned as to how did the elevator help the sales of the grain belonging to the European company as against their own, they simply said that they did not fully know what was going on inside the building. But they did realize that the grading results fell below their expectations, and concluded that unfair methods were being adopted in the elevator, which they had come to refer to as the "alligator."

It may be hinted in passing that the elevator happened to be worked in a period of intense political unrest. A leading feature of the non-co-operation movement was the boycott of foreign, particularly English, goods, and it rapidly developed into a general feeling of antagonism against all European businesses in India. This fact, again, may have been instrumental in keeping the Punjab producers away from the Lyallpur elevator with its English manager. It is true that in order to avoid exciting the suspicions of the peasants and the dealers, and to ensure straightforward operations, the Government wanted the elevator to work as a State enterprise; but, being a new and a highly technical industry, it was not deemed wise to place untrained officials in charge of it. And probably no Indian talent could have been forthcoming, while to engage experienced men from Europe and America would have proved very costly. In this situation no other alternative was open to the authorities. Our contention, however, is that the difficulty of finding suitable managers should have been realized before the

erection of the elevators, and should have been a potent factor in deciding whether one was to be started at all or not. The previous training of a few Indians should also have formed a part of the scheme, which should not have been confined to the building work alone. The problems that the Punjab administration and the Lyallpur elevator were confronted with are still in existence throughout Northern India. A single elevator cannot be of much avail either to the farmer, the trader, or the country as a whole. In order that the users of elevators may get due premium for their extra efforts or expenses, involved in cleaning and grading the grain, the limits of refraction will have to be brought down and the fixation of standards taken up in India, and not left to the importing countries. If the elevators are to be owned by the Government, they will have to be run and directly managed by the public authorities, and not through any private agency. Therefore, and also to avoid large expenditure in employing foreigners, a batch of Indians will have to be sent out to America to acquire the appropriate training and experience.

There are other and more fundamental difficulties, however, in the introduction of grain elevators in India. The system in North America has been described previously, and it shows that the elevators own, sell, and speculate in grain: they do not merely act as custodians or warehousemen; and their success is mainly due to these facts. It costs large amounts of money to build elevators,¹ and they cannot pay if used solely as storing-places. Since the Governments in India cannot assume the ordinary functions of traders, it will not be a paying proposition for them to start chains of elevators. Private enterprise is not coming forward because the business is not expected to pay. The exports of grain are small—wheat amounts to a negligible quantity, and the consignments of barley have never been very great—and the utility of elevators always lies in helping exports. Business and commerce are so highly specialized in America that, apart from her exports, even for home consumption the agricultural produce must first be sold by the farmers to the merchants and processors, and then dis-

¹ Vide *Report, Agriculture Commission*.

tributed by the latter to the consumers. Thus the grain from the whole country passes, sooner or later, through the elevators, and the management is assured of a satisfactory turnover every season. In India, on the other hand, a multitude of people—especially those in the rural areas—still buy their supplies direct from the growers: the milling operation—in the case of wheat and other cereals—is either performed by each family itself, or it is done by private arrangements, and the bread is cooked by the individual housewife herself. In such circumstances, and as the Punjab experiment demonstrates, our internal demand for wheat cannot be depended upon to provide enough work for the elevators. Moreover, bulk handling is not possible owing to the unwillingness of the railways to risk their money in constructing special wagons and trucks unless they are satisfied that the demand warrants such outlay of capital. And as wheat does not form the staple diet in all parts of India, where the locally grown rice and millets are mostly consumed, there is not much inter-provincial trade in this commodity. Labour being cheap in India, and the prices of jute bags being now very low, it is problematic if mechanical cleaning and the loose loading and unloading of the grain can be profitable. Therefore if the exports of grain are not important, if bulk-handling is not practicable, and if no other trading functions are to be done by the elevator companies, the elevators will degenerate into warehouses—rather expensive warehouses—or come to a premature end like the one at Lyallpur. Considering all these factors, it becomes clear that under contemporary conditions there is no possibility of grain elevators doing well in Northern India. The need of the hour is the provision of storing places, both in the growing areas and the market centres. They will provide accommodation for all agricultural commodities, and not simply for grain. Those in the villages, under co-operative management, are necessary in the interests of the *ryot*, who should be able to get loans from the credit societies on the security of the produce deposited in the godowns. He would sell whenever he thinks the time is opportune, and pay back the money to the credit societies. Very strenuous efforts will be required to persuade him to store in common with

others, but the co-operative basis of the godown will show him that no outsiders will benefit to his detriment. The dealers in the *mandis* will, perhaps, be easier to convince. The system of grading at licensed warehouses, the fact that they would be certified by the Government and always open to its inspection, the improved type of storage accommodation, and the inclusion of the receipts among the documents of title should prove sufficient attractions to convert the *arhtias*. Such warehouses would not be fitted with elevating machinery, their work would not depend on the overseas trade, and they would not indulge in trading. Therefore the impediments found in the path of grain elevators for India would not exist in the case of public warehouses. A network of godowns and warehouses would ensure "orderly marketing" within the country, in the sense that it will bring about a more controlled movement of agricultural produce from farm to wholesale markets and consuming centres—not completely uniform distribution of sales throughout the year—in the place of the feverish seasonal activities obtaining at present.

4. REGULATED MARKETS

Earlier we have examined, at some length, the procedure of selling and the practices prevailing in the primary markets of Northern India. We also exposed the onerous nature of the arbitrary deductions made by the merchants from the sale value of the agricultural commodities brought by the cultivators and petty traders for disposal. Coupled with high market charges, the common practice of the prospective and the pseudo-buyers alike of taking away, under the name of samples, substantial quantities of the produce, the inaccurate and false weights, and the almost universal custom of secret or "cover" (under the cloth) bids, thereby keeping the seller in the dark, and placing him at the mercy and honesty of his *arhtia*, are further defects found in the *mandis*. Sometimes the *dalals* work both for the sellers and the buyers, and show partiality towards the latter. In these numerous ways the dealers, the commission agents, and the brokers take unfair advantage of the unorganized and comparatively weak position of the suppliers from

the countryside. The cumulative effect is to be seen in the small amount of produce sold in the big *mandis* by the growers themselves. Individual measures or legislation on the part of the Government will no doubt help in improving marketing conditions, but that is not enough. The whole atmosphere of the *mandis* needs changing, and the practices found there require remodelling in order to create confidence among the rural population. At present the latter is suspicious, if not actually distrustful, of the traders as a class, and believes that they are out to swindle and to make money at its expense. Single items of reform will affect the business centres very slowly, and will not impress the *ryot*. The produce markets in the interior of the country are owned by a variety of interests, and managed on as many lines. Therefore it will not be easy for the authorities to enquire into the peculiarities of each and recommend suitable plans separately. Instead, a general enabling statute may be passed by the appropriate law-making bodies, aiming at placing all the primary markets on a uniform basis. Necessary modifications in matters of detail, relevant to the product concerned, may be allowed, but the principles should remain essentially the same, i.e. the markets should be run in a scrupulously fair, impartial, and honest manner without handicapping one party or favouring the other.

It was evidently with these motives that the Government of India (in the Foreign Department) promulgated in 1897 the Cotton and Grain Markets Law for the "Hyderabad Assigned Districts," as Berar was officially called at that time. Provision was made thereunder for the establishment of "regulated" markets at selected points. Management was vested in elected committees comprised of the representatives of the people living in the areas served by the various markets, and of the local authorities. With a view to maintain a hold and to exercise vigilance over the business transacted there, *arhtias* were registered with each market, and *dalals* and weighmen licensed in like manner were permitted to practise within the market yard. The deduction of unlawful allowances was prohibited, and standard weights alone were to be used inside the markets. Rules were prepared to provide a code for the

*Book No.—**Page No.—* FORM

CONTRACT BETWEEN BUYERS & SELLERS

Name of Seller.....*No. of Carts or Bojas*.....*Name of Buyer*.....*Rate per Khandi or Boja*.....*Signature
of Aditya**Signature of
Committee's
Servant**Date*.....

I do hereby agree that when the aforesaid Seller's cotton comes to be unloaded, if I refuse to take it at the price agreed upon the matter shall be referred to the Committee appointed for the purpose under Rule (21) 3 whose decision shall be binding on me.

*Signature of Purchaser**Book No.—**Page No.—* FORM

CONTRACT BETWEEN BUYERS & SELLERS

Name of Seller.....*No. of Carts or Bojas*.....*Name of Buyer*.....*Rate per Khandi or Boja*.....*Signature
of Aditya**Signature of
Committee's
Servant**Date*.....

I do hereby agree that when the aforesaid Seller's cotton comes to be unloaded, if I refuse to take it at the price agreed upon the matter shall be referred to the Committee appointed for the purpose under Rule (21) 3 whose decision shall be binding on me.

Signature of Purchaser

The *arhtia* fills in the form and hands over one portion to the market office, and the other to the seller. Similar forms have been printed for the Bombay regulated markets also. It will be noticed that special mention is made of the settlement of the disputes by the sub-committee of the market. The growers have to pay fixed amounts to the market committee, the *arhtias*, the *dalals*, and the weighman for the services rendered by them: no other marketing expenses are involved, nor any deductions in cash or kind permitted.

The Bombay and the Central Provinces Acts, having avoided the weak points which existed in the Berar system, represent an advanced type of market legislation. The chief defect of the last-named lay in the qualification prescribed for the membership of market committees, whereby it was difficult for the growers to get elected to them. It naturally resulted in the traders forming large majorities on the committees, and managing the markets in their own interests to the detriment of the peasants. As a consequence, despite its being prohibited by the law, "cover" bids continued. The writer, while studying the working of regulated markets at Amraoti and Akola in Berar, noticed a few cases where haggling was going on at the gins even after the prices of cotton had been settled in the market compounds. He was told on reliable authority that the weighmen, though licensed, still manipulated the scales in favour of the merchants, and that it was due to this possibility of illegal gain that the *arhtias* in Berar did not agree to the installation of weighbridges. To safeguard against these evils, the Bombay as well as the Central Provinces Market Acts stipulate that not less than half of the members of each market committee shall be persons elected by the growers of cotton of such area as the local government may prescribe—"the grower of cotton" is not to include a dealer or broker in cotton, although he may grow cotton. The remaining half of the committee is to be filled with the representatives of the municipality, district or local board, and the traders. Greater confidence has thus been generated in the hearts of the cultivators; and in 1931 necessary amendments were made in the Berar Law also to take the *ryot* out of the inferior position he had so far been occupying, and to place him on an equal footing

with the merchant. They involved the grant of representation to cultivators on the market committees, the publication of outside prices, the substitution of "open" for "cover" bids, and the arranging of arbitration between the sellers and the buyers. If, after this legislation, "cover" bids continue in the regulated markets and are condoned, the responsibility would rest as much with the agriculturists as with the dealers, and there would not be any just cause for complaint.

There is one fundamental criticism against all the three series of regulated markets: their sphere of activities is confined to one commodity, cotton, only. Although the Berar law provided for the organization of the sales of grain as well, in actual practice the regulated markets are almost exclusively meant for cotton, while the scope of similar markets under the Bombay and the Central Provinces legislation is restricted to that product. Apparently, because cotton was the most valuable crop of those parts, it was deemed obligatory by the respective Governments to do everything possible for protecting the staple and its growers. But there is no reason why the same facilities should not be made available for marketing other agricultural commodities also. In the Central Provinces legislation for establishing regulated markets for the sale of agricultural produce other than cotton was, however, undertaken in 1934-35. And it is highly advisable that the rest of the country should follow this lead and organize regulated markets, specially for wheat, oilseeds, cotton, and jute. The system may not be working faultlessly, but that it is an immense improvement over the ordinary unorganized type of market is admitted by all who have studied it at close quarters. The Director of Agriculture, Central Provinces, is of the opinion that ". . . the grower now gets a fairer price for his produce than he did before."¹ And the Director of Agriculture, Bombay, says "It may safely be stated here that the object to secure to the cultivator better prices, fairer weighment, and freedom from illegal deductions has to a large extent been served by the regulated market of Dhulia."² That being so, the urgency

¹ *Report, Jute Committee*, Appendix XIV (a).

² *Ibid.*, Appendix XIV (c).

of opening similar markets for various products in all parts becomes still greater. Special legislation, on the lines of the Bombay and Central Provinces Acts, should be introduced by the Provincial Governments. This step is necessary because, if the starting of such markets is left to the option of the local self-governing bodies—which, under the various provincial Municipal and District Boards Acts, are already empowered to establish, finance, and supervise the markets—no progress will be made, as the past experience amply demonstrates. Left to themselves, the urban and the rural boards have done little in the way of properly organizing the markets, particularly the wholesale produce markets, and regulating their activities. So many of their members belong to the commercial community, and so few of the growers are elected, that the subject of regulated markets will not receive sympathetic treatment at their hands. Further, it is desirable that a definite area of jurisdiction should be marked out expressly for each regulated market so that no other produce market may function within the same limits. Otherwise, by unfair and cut-throat competition, the regulated markets will be strangled.

A few additional points, in this connection, deserve attention. The performance of dual functions—of acting for buyers as well as for sellers—continues in the regulated markets. The *kachcha-pucca arhtias* act for both the groups, and some *dalals* do the same. Fortunately their number is not large, and the latter are mostly employed by the buyers. But at present a great deal of doubt exists in the minds of cultivator-sellers with reference to the fairness on the part of the middlemen. Therefore it is necessary that their operations should be confined to one business only—either arranging sales or negotiating purchases—if the growers are to be reassured of the prevalence of utmost straightforwardness and impartiality in the markets. The *kachcha arhtia* should operate solely for the seller, the *pucca arhtia* exclusively for the buyer, and the *kachcha-pucca arhtia* (if his continuance in the market is deemed essential) for merchant-seller and merchant-buyer only, and not for growers at all. Along with these commission agents, the brokers also should be given the choice of working permanently in the

interests of one party or the other, and made to stick to it: no brokers should be permitted to change over from the seller's side to that of the buyer, or *vice versa*, as the occasion may demand.

Next, the matter of proper weighing needs consideration. We have noted above that the weighmen in the regulated markets are licensed by the individual committees, but that their honesty is not above question, and that the Agriculture Commission recommended the installation of weighbridges in every regulated market and elsewhere too. It seems that there is a difference of opinion in respect of the advantages which can be derived from a reform of this nature. Opinion is expressed that, in the hands of dishonest persons, weighbridges and platform-scales both lend themselves to cheating. The chances of such frauds, however, can be nearly eliminated if the produce is weighed twice. If a weighbridge is erected in a market, it should be controlled by an employee of the market committee, and not by any weighman. On entering the compound, each cart should pass over the weighbridge, and the person in charge should note down on a prescribed form the name of the owner, the nature of the contents, and the gross weight. A copy, or the duplicate, of the form should be handed over to the cart-man. As the consignment will be unsold at that time, and the future buyer will not be known, no falsification of the total weight can be indulged in. Afterwards the transaction can be settled in the usual manner at the stall of the *arhtia*, and hand-scales weighing by licensed weighmen can take place either there or at the godown of the purchaser. The peasant, being aware of the approximate weight of his empty cart, will be able to calculate the net weight of his produce, and compare it with that arrived at by the weighmen. If he finds an appreciable margin between the two, he can pass the empty cart over the weighbridge and have its weight certified by the man there. No extra loading and unloading will be involved in this procedure, and the professional weighmen, realizing that their verdict is not final, will be obliged to practise honesty. The growers, feeling that they cannot be cheated any longer, would frequent the markets more.

Moreover, by adopting this method, no valid ground for another

objection, which is sometimes voiced, will be left. It is said that, during the weighing by hand-scales, the whole quantity of the produce is sifted, and dust falls away to a great extent, thus improving the quality. Further, that if cart-loads are weighed on the bridge and accepted for the purposes of trade, more adulteration and fraud on the part of the sellers may take place. It is with a view to safeguard against this danger that the suggestion has been made above about the retaining of hand-scales weighing by licensed men, and the supplementing of it with weighbridges in the interests of the growers. Then, again, undue importance is attached to the technical and mechanical difficulties of the weighbridges. It has been mentioned earlier that in the towns and markets of the Central Provinces—outside Berar—weighbridges are often to be found, and no particular trouble is encountered in running them. Surely, in this age of mechanization and automatism, it should not prove too much of a task to devise a foolproof weighbridge. The different parts could be made to fit into one another so well that little dust could penetrate; or, by lining the edges with india-rubber, the inner machinery could be rendered air and water tight.

One of the amended rules for the Berar regulated markets and those framed under the Bombay Act provide for the setting up of weighbridges when funds permit. It means that, in principle, their superiority has been officially recognized, but the actual installation is awaiting the accumulation of sufficient resources. It is not easy to agree to this reasoning. When the need for reform is admitted and a remedy is known and is accepted as correct, lack of funds should not stop the implementing of the policy already decided upon. Most of the regulated markets in Berar are self-supporting, but while some hand over the annual balance to the local municipality, others keep it for market improvements. In such circumstances, if the Provincial Government granted loans for the establishment of weighbridges, it should not find it hard to recover the money by small instalments. The very fact that a market shows a surplus at the end of the year is a favourable sign, and should be an adequate financial guarantee for the advances that the Government may make any time in the future.

CHAPTER XI

CO-OPERATION

I. THE CO-OPERATIVE MOVEMENT

WHILE dealing with the financing of marketing operations, attention was invited to the fact that the co-operative credit societies of Northern India do not as a rule advance loans against stored produce, or for the purpose of enabling the growers to hold it back for better prices. Owing to the preponderance of the credit societies, the co-operative movement is usually interpreted only as a banking system, involving almost exclusively loan transactions. At present, these institutions contain a number of defects. It should, however, be made clear that, although the following remarks apply to all the four provinces—Punjab, United Provinces, Bihar and Orissa and Bengal—in varying degrees, the conditions in the Punjab are much better than elsewhere; those in Bengal are more satisfactory than in the remaining two areas. It is tragic that the United Provinces, which along with the Punjab and Bengal was a pioneer in the co-operative field, should now be the most backward among all the major provinces of India. The main factors which have prevented the movement from gaining greater success and popularity are unsound organization, lack of supervision, little teaching of co-operative principles, insufficient Government support, inadequacy and unsuitability of the departmental staff, and the paucity of enthusiastic honorary workers.¹

Probably the most fatal mistake of the past lay in the unsound organization of the societies. Enough value was not attached to the education of the people in the co-operative ideals. The work of organizing new societies was generally combined with that of supervising old ones, and was entrusted to the same officials. Supervisors, organizers, or sub-inspectors—as they were designated in different parts of the country—were usually employed

¹ The movement in the United Provinces has been particularly emphasized throughout this section.

by the various co-operative Central Banks, which were established to finance the primary units. The staff of these lending institutions could naturally be expected to be more concerned with the monetary side of the societies than any other. Closely allied with the subject of organization was the work of supervision on the part of the Central Banks. The directors, the majority being busy professional men, knew little of their duties, and were content to leave the work in the hands of paid managers. The latter, crediting them with the best intentions, cared only for the recovery of the loans from the primary societies, and did not hold themselves responsible for anything else. Further, because the banks had made it a habit to grant loans of arbitrarily reduced amounts, the evil custom of making exaggerated demands grew up among the societies. And this practice was handed down: as between the primary societies and the individual members, the former did not sanction loans for full amounts applied for by the latter, whose counter-move was to ask for loans in excess of their requirements. Thus the real purpose of financing was lost sight of, and it degenerated into the parties trying to trick each other. Objectionable methods, such as making book adjustments and taking *benami* (fictitious) loans, as well came into vogue. The illiteracy of the masses was responsible for the introduction of an evil of the first magnitude—the employment of group secretaries. Because a member was seldom competent enough, or did not volunteer, to write the minutes, to keep the accounts, and to maintain other records, and as a primary society was too small a unit to afford a whole-time secretary, a number of neighbouring societies used to combine and engage a secretary in common. Actually, the secretary hardly ever went to the headquarters of the societies, but asked the members to attend at his own place. He frequently demanded bribes from the intending borrowers, and also on the occasions of the extension of the period of loans; and embezzlement of funds was the next stage in the "rake's progress." Even if the secretaries happened to be active and honest, the members did not obtain any opportunity to take part in the management of the society, and were doomed to remain ignorant.

The Government cannot escape its share of blame. When the movement was started, and the Co-operative Credit Societies Act was passed in 1904, it studiously avoided identifying itself openly with co-operation, and maintained a non-committal attitude. The progress, therefore, was not so fast and satisfactory as would have been possible otherwise. The Act of 1912 saw the authorities take courage and bless the movement officially. The privileges granted under the first Act were enlarged and increased. Later, in 1914, the attention of the local administrations was drawn to the necessity of supporting the movement.¹ Since then, the Governments have, on the whole, been sympathetic; but, on account of poor financial aid given to the departments of co-operative societies, operations on a larger scale could not be undertaken. The niggardly treatment meted out to the Co-operative Department in the United Provinces is reflected in the weakness of the staff. Widespread propaganda has not been possible, thus hindering the organization of new societies, and perpetuating the ignorance of the co-operative principles among the old ones. Supervision and inspection have been inadequately carried out, thereby giving a false sense of security and an additional lease of life to the mismanaged institutions. As regards the post of the Registrar, Co-operative Societies, United Provinces, there has so far been little continuity of office, as the incumbents were appointed and transferred according to the exigencies of the Indian and Provincial Civil Services: the requirements of the co-operative department were not always kept in view. Occasionally the Registrar was deputed by the Government to represent the province on the Central Legislature. No long-term policy could be pursued under such circumstances, particularly when, on their transfer from other branches of administration, the gazetted officers joined

¹ We find that in the Resolution No. 12-287-1, dated Simla, June 17, 1914, the Government of India laid down that "... as co-operative societies are no longer isolated experiments outside the sphere of district work, and as beyond the material benefits which they offer, they represent an influence closely connected with the welfare of the people and powerful now and in the future, for good or evil, the district officer cannot dissociate himself from the movement."

the department straight away without undergoing any previous training.

Be the attitude of the Government what it may, the public cannot be absolved of their responsibility in the matter. In those countries of the world where co-operation is a living force, non-official efforts have mainly contributed to the success of the movement. In Germany, Denmark, and Ireland, till recently, when on account of the economic crisis the respective Governments had to come to the rescue, the work has mostly been performed by the members themselves on an honorary basis. In India, on the other hand, people seldom come forward to co-operate in real earnest. With a few honourable exceptions, donations are non-existent, and the spirit of voluntary labour is sadly lacking. The general absence of civic sense among the citizens is greatly to be blamed for this situation. Under the present system, it may be generations before the public authorities, with limited funds at their disposal, and with multifarious duties to discharge, can make any impression. Therefore, whichever way we turn, we are faced with the desirability—nay, the urgency—of the educated and more fortunately placed Indians rendering social service to the nation.

At the moment, a controversy exists with reference to the most suitable agency for sponsoring the movement in India. Some leaders of thought believe—and rightly too—that co-operation essentially concerns the people, and, citing the instances of the Continental countries, they conclude that the co-operative work in India should be left to non-officials. The opposite camp pins its faith on governmental control of the societies. Regarded in its true perspective, it becomes evident that the problem of future policy cannot be solved by adhering severely to either of these extreme dictums. What is needed is that public opinion should be thoroughly educated in co-operative ideas, and opportunity given to it to imbibe the spirit of the movement. Only after becoming conversant with the possible advantages of co-operation can the people be expected to demand the establishment of new societies, and to come forward to work them. The Government

should, for some time to come, confine themselves to occasional inspection and periodical audit. Later, when the Provincial Co-operative Banks, Institutes, or Federations are mature enough, these also may be entrusted to them, and the State may be content with watching the co-operative activities from a distance. Government participation in the movement can prove very beneficial if it is carried out in the right manner. In France, for example, State aid has led to the formation of influential co-operative units.¹ Incessant propaganda by the pioneers, encouragement by the authorities, and favourable legislation have assured co-operative institutions a prosperous future and a permanent place in the agricultural economy of that nation. The relationship between the co-operative departments and the societies should be that of a guardian and a ward. Relaxation of control and ultimate retirement behind the scenes should be the aim of the officials. Unfortunately, it has not always been so in India. Again, a change of outlook is needed with reference to the proper place that the Central Banks should occupy in the movement. In some parts of the land, and in the minds of certain co-operators, these banks are looked upon as the focal-point of the system. But it has been explained above how they have concerned themselves mainly with the financing aspect, and ignored other duties. The primary societies should have been used from the very beginning as the foundation for the co-operative structure. The Central Banks are formed through the affiliation of the smaller bodies, and exist principally to finance them. Obviously, then, the village units are the mainstay of the movement, and should receive first attention. A further weakness in the co-operative machinery lies in the fact that, hitherto, little appeal has

¹ "The history of agricultural co-operation in France is instructive, as it contravenes the theory of the liberal economic school, which refuses to recognize any efficacy in State aid. It shows, on the contrary, how in a *milieu* hostile to the co-operative idea, and where private initiative would probably have remained impotent, the persevering work of the State has brought into being a flourishing co-operative movement which, although inferior to that of Germany, Denmark, or even to that of Italy and the Baltic countries, is nevertheless by no means negligible."—*Year-Book of Agricultural Co-operation*, 1930.

been made to the landlords to join the common fold. Their support should be obtained, as it would enhance the prestige of a society and add to its strength. Moreover, the various Government departments should fully collaborate in the work of national uplift and reconstruction.

Another point that deserves notice in this connection is with regard to the question of liability. Broadly speaking, while the rural credit societies in Northern India have unlimited liability, all other co-operative institutions have limited liability (guaranteed liability is uncommon, and reserve liability has not been advocated). Unlimited liability frightens away many prospective members, and the well-to-do farmers, whose membership would invest the local society with a representative character and elevate it in the estimation of the fellow men, are afraid to join. The MacLagan Committee¹ were of the opinion that unlimited liability had worked well in India, and that there was no need for any alteration; yet it is becoming evident now that unlimited liability is not suitable. At best, it has hardly been of any real help to the societies, and, at worst, it has proved an impediment to further expansion. Comments to this effect have, occasionally, been made by the Registrars also. The advantages claimed for the unlimited liability system are mostly indefinite, and cannot be easily substantiated. The harm, which it is capable of, is very obvious and far-reaching. Therefore it is advisable that unlimited liability be removed from among the rural credit societies, and that the entire movement be put on one uniform principle of limited liability.

Since the introduction of the Montague-Chelmsford reforms, and the inclusion of the co-operative departments in the portfolios of responsible ministers in the provinces, a more forward policy has been adopted. The Indian Co-operative Societies Act of 1912 has been amended in certain provinces to suit the local and changed conditions. A number of enquiry committees² have been

¹ The Indian Co-operative Enquiry Committee, 1915.

² King Committee (Central Provinces), 1922, Report published in 1928. Oakden Committee (United Provinces), 1925-26. Townsend Committee (Madras), 1927-28. Calvert Committee (Burma), 1928-29. Hubback Committee (Bihar and Orissa), 1931-32.

appointed by various administrations to take stock of the movement, and to point out ways of remedying the defects. The Agriculture Commission and all the Banking Enquiry Committees also examined the question and made many useful suggestions. The cumulative result was that an era of all-round development dawned and led to greater activities in the co-operative sphere. The progress, however, was interrupted on account of the financial difficulties of the Government due to the world economic depression. But, now that there are signs that the country has turned the corner, the task of rebuilding the damaged structure and of extending the existing system should be taken up once more with renewed vigour and energy. Co-operation is not suggested as a panacea for all ills; but this much must be said, that no other single scheme affords so many opportunities for ameliorating the lot of the Indian peasant and worker alike. Quite a number of the recommendations of the enquiring bodies have not been given effect to, or have been accepted partially only, and they furnish a working basis for the remedial measures of the future.

2. CO-OPERATIVE MARKETING

Despite setbacks, probably the greatest hope for the agriculturists lies in the joint sale of their produce. In theory, a multitude of advantages are claimed for it: improved marketability of goods, possibilities of developing markets (by means of advertising, etc.), stabilizing of production, controlling the flow of the supplies, increased bargaining power of the growers, reduced costs and more efficient service, ability to finance the marketing and producing operations of the members, and so on. In Europe and America—whenever it has been efficiently managed—co-operative marketing has succeeded in conferring most of these benefits. In the Bombay Presidency, too, sale societies for cotton are doing remarkably well with the help of the Co-operative and Agriculture Departments. In Northern India, on the other hand, not much headway has been made in this direction. Their potentialities not being recognized early enough, serious attention was not given

to the growth of the sale societies. On the whole, the result has not altogether been gratifying. In the Punjab there were twenty-two Co-operative Commission Shops in 1933-34; and in the United Provinces 111 Cane Supply and a few *ghee* and sundry societies existed in that year. In Bihar and Orissa, some agricultural sale societies were registered in the past, but they were all liquidated by 1929—about 70 to 80 grain *golas* (societies advancing loans in kind), however, are still working. And in Bengal the Jute Sale Societies had started with great promise, but by 1930-31 all of them had to be closed down: now, about 74 Paddy Sale Societies and 264 Milk Societies (Production and Sale) are functioning. Let us examine in a little detail the methods of working of these institutions, and the reasons why they have not fared better.

The Commission Shops in the Punjab, established at important market centres, arrange the sales of all agricultural commodities belonging to the members as well as to non-members¹: it has not been regarded opportune to set up special organizations, each for a single article. They also receive goods for storing, and advance loans on the same. For their services they charge fixed commissions, as has been shown earlier at some length. Dividends are declared to the shareholders, if funds permit. Although their number has slightly increased from time to time, the Commission Shops have not been extensively patronized, and some are on the border-line between success and failure. The main factor responsible for the condition of stalemate is the location of the shops. Being situated at the chief commercial points in the province, they are in a way removed from the producing areas. Subsistence farming being still common, the small grower predominates, and always prefers to sell his crops in his own neighbourhood, thus avoiding the cares and worries of traversing long miles. Unmindful of the favourable terms obtainable through the co-operative agency, he seldom carts his produce to the *mandis*. Disloyalty to

¹ As the members did not patronize the Commission Shops sufficiently, and as a certain annual turnover was required to make the shops successful, it was decided to undertake business for non-members also; the members, however, get dividends on their shares and stand to benefit, ultimately, from all the operations of the shops.

their society, therefore, is greatly prevalent among the members: they sell whenever they are hard pressed for funds, and to any buyer who is conveniently available. Binding rules, threatening penalties against the disloyal members, have been passed by the Commission Shops, but have not been properly enforced. Then the management of the shops is far from efficient: the staff is generally untrained, and is no match for the *arhtias*. The latter have often carried on adverse propaganda, and in many places have repeatedly boycotted the shops. Sometimes, owing to insufficient business, it has not been possible to keep the working expenses proportionately low, and losses have, consequently, been suffered by the shops. In a few instances, the managers have proved to be dishonest, and have committed embezzlements. It is due to the great watchfulness and strict supervision of the department of co-operative societies that the weaknesses have not had fatal results so far, but it cannot be asserted that there is an enthusiasm for joint sales.

In the United Provinces there was previously no marked tendency towards the co-operative marketing of agricultural commodities. Solitary institutions existed here and there, and worked indifferently. A few societies for the sale of *ghee* did yield satisfactory results; but they always remained independent entities, and their scope was not enlarged. With the development of modern sugar industry, however, cane supply societies came into being. Their number has increased rapidly during the last four years, and they are on the whole doing well. The area of jurisdiction of a cane society is one village, or a group of villages. It collects the produce of its members, sends it to the factory, and distributes the sale price, when received, among the owners. The growers appreciate the convenience arising out of this arrangement. They equally value the fair treatment extended to all, and the just prices they obtain. The sugar mills also prefer to deal with the societies owing to the large supplies the latter can command. Some co-operative sugar refineries (working by the indigenous process) and open-pan factories have been started; and an up-to-date vacuum-pan sugar mill, co-operatively owned,

was opened in the season 1932-33. These recent innovations are a welcome sign, and, if properly directed, hold a bright future for the cane growers of the province; but the old methods of refining or manufacturing sugar are wasteful, and should not be encouraged. The sale societies of Bihar and Orissa were established to help in the disposal of agricultural products of all kinds. Their organization was hasty, hence unsound. As time passed, the zeal of the members began to wane, and their loyalty deserted them. Year after year, the membership decreased, the capital dwindled, and the number of registered societies diminished, till all had to be liquidated. The difficulty of getting experienced and competent managers possessing knowledge of co-operative institutions was, again, a contributory cause to the *débâcle*. Frauds and embezzlements played their part too in bringing the sale societies to a premature end.

Jute Sale Societies, in Bengal, were formed with high hopes. For some years their numbers increased, and, notwithstanding the official warnings about the dangers of rapid expansion, they were generally considered as occupying a strong position. In 1926 the Societies affiliated and started the Bengal Wholesale Co-operative Society, Ltd. It was to act as the agent of the primary societies for the sale of jute in Calcutta. Subsequently the Wholesale Society took steps to ensure uniformity in the standard of assortment of the jute sale societies. This tended to enhance the reputation of the supplies marketed through the society, which brought out its own mark to be fixed on its bales. But all this time the primary sale societies were running at a loss, and their finances were far from satisfactory. In 1930-31 liquidation proceedings were commenced against most of them as they, and thereby the Wholesale Society as well, had become insolvent. Then it was found that the Jute Sale Societies had not functioned on co-operative lines, that speculative elements had been present, and that the *ryot* had not derived any benefit, as he was not getting a higher price by selling through them. It was even discovered that a few societies had been operating in the interests of some dealers. By the next year all were placed under liquidation. The organization of the Jute

Sale Societies, again, was faulty: they multiplied themselves in a hurry without much preparation, and the members were hardly conversant even with the rudiments of co-operation. Suitable staff was also not available, thus adding to the misfortune of the societies. Milk and Paddy Sales Societies, along with the Calcutta Milk Union are, however, working satisfactorily.

In spite of the failure of so many co-operative sale societies in Northern India, the writer's faith in their future remains unshaken. It may be re-affirmed here that there is nothing fundamentally wrong with the co-operative principles, and that they hold out great prospects. The institutions have not been properly managed, and the true spirit of co-operation has been lacking. Remove the defects and the movement will prosper and become a living force. Firstly, it should be remembered that intensive propaganda is a *sine quâ non* to an enterprise of this nature. The minds of the people should be patiently prepared and made receptive of co-operative ideas. Steadily the merits of the scheme should be brought home to them. Slowly the opposition should be overcome. Secondly, the structure should be built from the base upwards, and not from the top downwards, as has so often been done in the past. The happy maxim of the rural credit societies—one village, one society—applies to the marketing field to an equal extent. The provision of sales facilities for the peasant, involving the removal of the present disabilities from his path, is the *raison d'être* of marketing societies. Therefore a beginning should be made in his locality rather than in market centres. The problem of transportation is a formidable obstacle to the *ryot's* desire to dispose of his produce—which is usually in small quantity, and of not very high standard—in big *mandis*; and the incentive remains weak whether he ultimately employs a commission agent or a co-operative shop to negotiate the deals. The formation of village sale societies is, thus, the only solution for encouraging co-operative marketing: the conveniences should be taken to the very door of the *kisan* (cultivator). It is not essential that one sale society should be established for each village individually, though this should normally be the basis of organization.

Where a village is regarded as too small to offer satisfactory scope for a separate society—and there will be innumerable instances of this kind—a few neighbouring villages should be treated as one unit for the purposes of co-operative marketing.

The village godowns, recommended in the last chapter, should be placed under the control of these societies. Members may either merely store their produce in the godowns and sell it themselves when they deem fit; or they may hand it over to the societies for disposal, which will be the more desirable course. In the first case, a small rent may be charged by the societies for the use of the godowns; and, in the second one, only a low rate of commission should be levied on the sale proceeds. On no occasion should the sale societies buy up the produce from the growers, nor assume any responsibility as to the prices obtainable. Otherwise they might find themselves in financial troubles, and might have to suffer losses. Cleaning and grading of all the agricultural commodities inside the godowns should, necessarily, be undertaken by the societies. On the security of the stored produce and up to half or two-thirds of its market value, loans should be advanced by the sale or credit societies: such loans ought to be the first charge on the sale proceeds. Experiments in lending money on the standing crops may also be usefully tried in selected areas, the officers of the agriculture departments helping by valuing the crops. The financing of primary societies, both sale and credit, should be performed in the usual manner by the Co-operative Central Banks. But for the sake of co-ordinating the work of village societies, and to provide higher marketing offices, Sales Unions should be established at central places and in larger *mandis*. And if a sufficient number of unions begin operations a provincial federation may be brought into being on the lines of the now-defunct Bengal Wholesale Co-operative Society. So the small sale societies would become affiliated to the Central Unions, and the latter to the Sales Federation, thus setting up an independent and a complete system of co-operative marketing agencies. In this way it may be possible to facilitate work and reduce expenses.

Being in a position to compete on equal terms with the big non-co-operative firms, the Unions and the Federations would be able to reach the important consumers. Nevertheless, each institution should be an autonomous and a self-supporting body: normally, the village societies would be expected to arrange their own sales, and build up a permanent clientele. When, however, the Unions receive orders to supply considerable quantities, they should fix quotas among the affiliated societies and distribute the business accordingly. Again, if the consuming centres are situated at some distance from the producing areas, or if better prices are to be had by selling through the Unions, the latter may act as the agents of the societies. These would form the broad functions of the marketing organizations, whose general policy should be to put through a few large transactions rather than negotiate a number of small deals. The Co-operative Departments, apart from carrying out the routine duties, should help directly by asking other departments to patronize the sale societies by placing orders with them. The State demand for agricultural commodities, owing to the rationing of the army, jails, hospitals, etc., is immense; and there is no reason why the co-operative sale societies—if they are efficiently managed—should not be asked to supply these requirements. The custom of educational institutions and of the processing and manufacturing industries should also be solicited. The building up of such a practice would be to the mutual advantage of the parties: the growers would not have to sell their produce in a hurry, and the consumers would be assured of regular, clean, and unadulterated supplies. But the co-operative sale societies and unions should on no account indulge in speculative business, nor even hold the produce over a long term in anticipation of a rise in prices. They should merely act as agents for their members, and the taking of unnecessary risks should not form part of their functions. Moreover, the management would seldom be equipped with sufficient knowledge and experience of international economic conditions, which govern the world prices, to justify any speculation by them.

The co-operative marketing societies, unions, and federations

should be registered on the basis of limited liability. Individual peasants should subscribe the share capital of the societies, the latter of the unions, and both the groups should be the shareholders of the federations. While the affiliating bodies may well confine their efforts to the disposal of the agricultural products, it may be better for the sale societies to undertake, for their members, joint-purchasing as well. Although the village units may remain busy throughout the year selling the stored commodities, and may not find time hanging on them, it would be to the advantage of the farmers to have their requirements bought jointly. Goods, thus purchased, may cost less, or may lead to the grant of terminal bonuses, and may be of better quality. And the societies may secure a larger annual turnover for themselves by arranging co-operative sales and purchases both. However, of more fundamental importance from the standpoint of the co-operative movement as a whole, is the idea that a continuity in the relationship of the members and the society is very much to be desired. For example, if a person has joined a sale society, the only time that he comes into contact with the latter is after the threshing operations are over, and when he is ready to hand over his surplus produce: thus he may transact business with his society once or twice a year only. In a situation like this the member would not have many opportunities of examining the benefits of the movement at close quarters, and would not become a dynamic part of the co-operative machinery. Therefore more occasions should be provided to enable the members to come in touch with the societies. A beginning may be made with the joint-purchasing of agricultural requisites and articles of daily use for the peasants. It should not be restricted to farm goods only, otherwise the scope of the work would be very small indeed.

Another preliminary condition—besides propaganda and sound organization—for an efficient system of co-operative marketing agencies is the employment of a suitable and intelligent staff. The submerged rock of defective management has been greatly instrumental in sinking the ships of co-operative enterprise. Integrity of character, ability to perform the duties assigned, and common

sense are indispensable to any service; but training in the business practices and experience of the actual methods are very much needed in running the sale societies. These bodies are expected to compete with traders possessing resources and knowledge denied to the former. The private firms, moreover, would not hesitate to do anything to crush their rivals. Therefore the co-operative efforts should commence on small scales, and should develop as staff fit for the satisfactory discharge of the functions is available. It is necessary to learn how to walk before one can attempt to run. As regards frauds and embezzlements, the best course is prevention. By making the salaries more liberal, by instituting more checks in the accounts, and by more frequent and searching audit, many future defalcations could be prevented, or at least brought to earth in a short time. And if such cases do arise, and when prosecution is started, the judicial authorities may be asked to pronounce severe sentences on the guilty persons; and utmost publicity should be given to the convictions. Falsification of books and misappropriation of funds are not common in Government offices: they could be avoided or reduced in like manner in the co-operative institutions as well.

Lastly, loyalty on the part of members should be fully assured. This has presented serious obstacles in the past; but by means of propaganda and constant education in co-operative principles, some sympathy may be created. The charging of a lower selling commission, or the procuring of higher prices for the agricultural commodities by the marketing societies may also ultimately result in more growers joining the co-operative ranks. Contracts binding the members to sell through their societies should be universally adopted; and, in cases of default, the prescribed penalties should be rigorously imposed. Compulsion, by which the farmer members can be made to sell the produce to—or through—their societies, has already been introduced in certain countries, e.g. the United States, Canada, and England (National Farmers' Union); and, with the establishment of sale associations all over the country, the advisability of placing similar restrictions on the peasants will have to be seriously considered in India too.

The best way of increasing customers—both members and non-members—in the matter of joint-purchases, however, would be to follow the principle of the Rochdale Pioneers of giving patronage dividends, under which periodical bonuses are declared on the basis of the value of goods bought from the co-operative store.

While discussing the future organization of the sale societies, their mode of operating, and the conditions necessary for success, it is worth while taking note of the limitations of any form of co-operative marketing, especially as the public outside and even the members often expect too much from new organizations. Some societies may take over the wholesale functions, and others may discharge the retail ones; but this would not amount to the "elimination" of the middlemen: it would just be integration. The process of combining a number of functions under one group or control, thus eliminating a stage of production or distribution here and there, is continually going on even among the non-co-operative enterprises, and would not be peculiar to the co-operative ventures. Manufacturers buying direct from the growers and selling straight to the consumers—thereby eliminating both wholesale and retail dealers—supply evidence of the non-co-operative attempts at the "elimination" of the middlemen.

Another limitation is that the co-operatives cannot guarantee high returns to their members. Prices are determined by the general conditions pertaining to the supply of and demand for particular articles. The co-operative organizations, even when strong enough to exercise considerable influence on the world markets, cannot fix the prices. Thirdly, the co-operative management cannot be much cheaper than that of private businesses. Marketing operations, being highly specialized, necessitate the employment of well-trained and experienced managers. They must be paid adequately to retain them in the service of the societies and the unions. But the *arhtias*, running their own firms, do not ask for separate salaries and are second to none in their market knowledge. Further, while a co-operative manager, being an employee, is not so much personally interested in cutting

down expenses, the dealers are keen on making the smallest savings as the result would benefit themselves. One remedy for this situation might be to get the members to work voluntarily for the societies, but on account of lack of experience they may do more harm than good. Consequently the payments in engaging expert managers cannot be avoided: all that can profitably be done is to increase the annual turnover of sales so that the costs per unit may not amount to much. Again, it should be borne in mind that members of marketing societies may sometimes get less for their produce than other growers. Individual dealers may sabotage co-operative organizations, and may plan to create disaffection among the members. Or they may be urgently in need at the moment, and may offer better terms than those obtainable from a society. Or the higher prices secured by the farmers outside the co-operative fold may have been paid for produce of superior grades. Inherent limitations and weaknesses, thus, exist in the system of co-operative marketing; but it is the duty of the organizers to protect the members from being misled by the opposite camp, and to guard them against insidious propaganda and unfair tactics. One forewarned should be forearmed.

3. AGRICULTURAL ASSOCIATIONS .

So far the discussion has mostly centred round the various defects that prevail in the agrarian system of Northern India, especially in the marketing field. Although the foregoing recommendations are intended to remedy certain specific evils, it would be beneficial if some institutions were also created to co-ordinate the work of the different agencies. The conditions in India resemble, to a certain extent, those in France, which is primarily an agricultural country with many small and medium-sized peasant holdings. The temperament of a French farmer is essentially individualistic. The French Agricultural Syndicates came into existence by the law of March 21, 1884.¹ Since then they have steadily gained in strength and influence; so that now they number about 15,000,

¹ Vide *Year-Book of Agricultural Co-operation*, 1930.

with one national and many powerful regional federations.¹ By teaching new methods of agriculture and the use of machinery, by the dissemination of knowledge and propagation of seeds, plants, etc., by representing the grievances of the farmers to the authorities and transport agencies, by sponsoring legislation to the advantage of the agrarian community, and in diverse other ways, the Syndicates have rendered invaluable service to French agriculture. Patient and honest efforts should yield similar successful results in India as well.

A few agricultural associations do exist in the Punjab, Bengal, Madras, and Bombay; but they are more or less in a moribund condition, and have seldom proved effective. Similar organizations, more vigorous and active, are needed in all parts of the country. Their main function should be to bring together all the persons interested in agriculture, in one capacity or the other, irrespective of profession or calling. Officials—using the word in the broadest sense—*zamindars*, tenants, merchants, bankers, social workers, etc., should be assembled under one banner. The associations might act as liaison officers between the Government and the governed: they should be in touch, simultaneously, with the agriculture, co-operative industries, education, medical, public health, and works departments, and the municipal, district, local, and *taluk* boards. If village *panchayats* are functioning, their co-operation should be particularly invited. These authorities should be given every assistance in connection with their work affecting country life. The agricultural associations should also endeavour to safeguard the interests of the rural community by acting as its spokesmen and champions. They should undertake publicity campaigns in favour of improvements in agricultural conditions; and should, on behalf of the people, make necessary representations to the proper quarters. They should not wait to be asked to take up certain matters, but should put forward remedial measures on their own initiative. They would not be, normally, required to serve as joint-purchase or co-operative marketing societies unless, in the absence of the appropriate

¹ Vide *Year-Book of Agricultural Co-operation*, 1935.

agencies, they are specifically directed to do so. Briefly, the agricultural associations should aim at providing a forum for the rural classes and village opinion in general, and should be prepared to do everything possible to alleviate the lot of the agriculturists. Their duties should resemble those performed by the chambers of commerce and industry.

Associations in India should in the first instance be started on a district basis. Official patronage must be secured, as the Government officers undoubtedly wield great influence in small cities, towns, and villages. Registration should be sought under the Co-operative Societies Act, with share capital and limited liability. It should be made plain to the shareholders that these institutions would be non-profit making. Annual subscriptions and donations from individuals and grants from the public authorities should also be obtained to meet the recurring expenditure. Citizens, co-operative societies, and central banks should all be invited to become members. After the district associations have worked satisfactorily for, say, five years, decentralization might be introduced. Village associations may then be formed on identical lines, and later be affiliated to the central bodies, and buy qualifying shares in them. If, however, the capital of the district associations has already been fully taken up, they should be asked to increase it. The idea is that the village associations, once they have been established, should control the district associations so that there may be one common policy throughout. A beginning cannot be profitably made in the reverse direction, i.e. with the village units, as at first the educated and philanthropic support of well-to-do people, residing mostly in urban areas, would be needed. And after the movement has succeeded in the countryside, it may be further expanded by the district associations affiliating themselves and forming provincial federations; and ultimately, if desired, the last-named may set up an all-India institution.

CONCLUSION

THE present study has been undertaken with particular reference to Northern India, but it would not be wrong to assert that the same conditions prevail, to a great degree, in other parts of the country as well. Therefore the reforms suggested for the former could, in the wide sense, be applicable to the latter also. We may sum up the Indian agricultural situation by saying that there are vast possibilities of progress on the technical side of agriculture. Better seeds, manures, and implements; extensive and more diverse irrigation facilities, and consolidated holdings would go a long way towards increasing the yield and improving the grade. In order to become self-sufficient in the supply of wheat, Italy started the "Wheat Campaign" in 1925. By intensive efforts, it achieved the objective in 1933, within eight years, and celebrated the "Wheat Victory."¹ We may not agree with the political doctrines and the economic policies of the Fascist regime, but the fact remains that the nation-wide work enabled appreciable additions to their annual harvests. Given the necessary resources, authority, and will, similar results can be achieved in India also.

The second problem facing Indian agriculture is the large diminution in the exports of cereals. And though the likelihood of substantial exports of wheat in the future cannot be visualized, this does not involve any cause for anxiety. The home market is so vast that for a long time there could be no danger of the accumulation of surpluses. The diet of the people, especially of the masses, leaves much room for improvement: a permanent state of under-nourishment is to be found everywhere. Poverty is at the root of this; but there is another cause as well. In India the first consideration has been that of religious sanction. Does our creed permit the partaking of certain victuals or not? has been a standing question with us. It is time that we corrected our standard and attached more importance to the health-giving

¹ Vide *Agricultural Situation*, I.I.A., 1931.

factors instead. The food eaten by the *ryot* is inadequate in quantity and inferior in quality. Wheat, vegetables, fruits, and dairy and livestock products, should find place in their menus. Wheat is consumed by a small section of the total population. As it is a superior food and contains higher nutrition, it should be eaten by all: hence there is an immense scope for promoting the consumption of wheat. Coarse grain could then be used for feeding cattle, thus bettering their physique. And land, under crops which are no longer required for human consumption, may advantageously be given over to the cultivation of fodder and rotation crops.

With a view to encouraging greater consumption, the purchasing power if the people will have to be increased. One way of achieving this would be to explore the avenues for subsidiary and alternative industries. Because of the absence of cottage industries, a good deal of the time of the agriculturists is wasted, and they earn no supplementary incomes. The agriculture departments should try to popularize fruit-growing, bee-keeping, silkworm rearing, dairy farming, and stock-breeding. They should experiment upon the methods of utilizing, in the cheapest and the most productive manner, the agricultural by-products; and when satisfactory results have been obtained a system of giving full training to a few persons, to enable them to start their own enterprises, should be devised. In certain cases and under appropriate provisions loans may also be advanced to those who intend to open such businesses. India produces all sorts of fruits, and has large supplies of sugar; therefore tinned fruit, preserves, and pickles industries ought to be the obvious outcome. The provincial industries departments have, so far, done little to suggest new ideas to the people. Clearly it is their duty to survey the field for possible opportunities of setting up fresh industries. A permanent staff of scientists should be employed to carry on continuous research in these directions, and to publish periodical statements about their work. From time to time, as the occasion may demand, enquiries to discover potential channels for future efforts may be instituted through committees of experts. If the State does not perform these pioneer-

ing functions, private people, owing to lack of knowledge and insufficient funds, will not be in a position to attend to them on their own initiative.

With improved production, the need for efficient marketing arrangements would automatically assume greater significance. Through the collaboration of the Government departments and the co-operative societies, and with the active help of agricultural associations, it should prove feasible to establish fair competition between the growers and the dealers. And by means of the reduction of costs, the simplification of functions, the co-ordination of business policies, the fixation of standards and grades, the regulation of markets, and the improvements in transportation, not only will the producers stand to gain, but the consumers and the whole country are likely to be benefited. The appointment of marketing officers and the formation of provincial boards, the attempts at developing communications, and the grants for uplift work in the rural areas are signs that better times have arrived. But a note of caution may be struck here. The ultimate goal should be constantly kept in mind, and the policy now adopted should be pursued to its logical conclusion. Every step should be taken in that direction. There is always a real danger of becoming so entangled in the issues of the immediate hour as to lose both sense of direction and proportion. It is not enough that one should take each step with care and after proper examination: even then one may find oneself on the edge of a precipice. What matters most is that the series of steps should each be examined in itself, with an examination of all together; and that the objective should never be lost sight of. The salvation of India will depend on the manner in which her agricultural problems are handled.

APPENDIX A

SCHEME OF INVESTIGATIONS

THE researches and enquiries which preceded the present study covered a period of five years, and involved personal visits to a number of representative markets for different commodities. Thus the working of the Lyallpur and Amritsar *mandis* in the Punjab; Delhi market; Hapur, Meerut, Ghaziabad, and Cawnpore *mandis* in the United Provinces, and all the markets in Calcutta were examined on the spot to obtain first-hand knowledge. The writer himself, coming from the rural parts of the United Provinces, was in a position to maintain a close and a permanent contact with the peculiar problems of that province. Although a study of staple agricultural products—wheat, cotton, oilseeds, sugar-cane, and jute—of Northern India only was contemplated, the writer travelled south to Wardha in the Central Provinces, and to Amraoti and Akola in Berar to watch the transactions in the regulated markets there, and to acquire detailed information about them.

The exact line of enquiry varied according to the nature of the particular crop, market, and province; but the general procedure adopted was as hereunder. On reaching a *mandi*, a guide—always a well-informed business man—was procured through the kind offices of the local agents of the joint-stock banks, or high revenue officials. Accompanied by him, and armed with letters of introduction, the writer started on his work. First, the transactions that were going on in the markets were carefully followed, and points noted down. If there were any doubts, questions were put to the guides. Then investigations on a broader scale were undertaken. About a score of *arhtias* (both *kachcha* and *pucca*), *dalals*, and sellers from the countryside (*beoparis* and cultivators) were cross-examined on the basis of the questionnaire given below. After writing down their replies, an attempt was made to find out

the extent of discrepancies, and to work out the mean factors. Later, the agents and other employees of the local branches of joint-stock banks (generally four to six in number) were questioned at length, and the material supplied by them was compared with that already collected. Where possible, the assistance of high district officers—e.g. Deputy Commissioners, Deputy Collectors, and Tahsildars—was gained, and they put the writer in touch with the village and *pargana* revenue accountants—i.e. *Patwaris* and *Qanoongos*—who possessed every information about those areas. They maintain regular records on most of the points concerning land, revenue, and agriculture, while in the absence of such records their memory and knowledge of local affairs were relied upon. In the end, the replies given by all the informants in a particular market were compared together, and then the extremes were eliminated and the observations supported by the largest number adopted.

This formed the general scheme of investigation; but, as circumstances permitted and facilities existed, other sources were also drawn upon. At Lyallpur, members of the staff of the Agriculture College, and managers of the Co-operative Commission Shops and of a few cotton gins and presses and flour-mills were examined. At Amritsar, the Chairman of the Municipal Board, himself a prominent merchant and the President of one of the two companies established for the regulation and registration of futures transactions, supplied valuable details. In the United Provinces and Calcutta markets, the staff and the office-bearers of the various Chambers of Commerce proved a mine of information. In Berar, the Market Committees, as well as the representatives of European and Japanese firms of exporters, gave considerable help.

QUESTIONNAIRE

A. COSTS OF PRODUCTION

1. What crops are grown in your locality?
2. The rate of land revenue or rent differs according to the nature of the soil and situation of the fields. What are the local assessed rates?

3. What irrigation facilities are available? Which is most efficient, easy, and cheap? Give the costs of each.

4. Are the seed and manure, used for cultivation, owned by the peasants or bought or borrowed? How much do they cost per acre?

5. How many agriculturists own bullocks and in what number? What prices are ordinarily paid for an average pair? For what period do they give satisfactory service? How much is usually spent in maintaining them?

6. Who performs the agricultural operations? Are any labourers employed? If so, how many and for what crops? What is the general standard of wages?

7. What is the extent of indebtedness? What is the normal amount of debt per peasant? How much interest is commonly charged on the various types of securities? Who does the business of lending? Are any payments made in kind to the creditors over and above the interest?

8. How many co-operative credit societies are working in the neighbourhood? What is the total membership of your society? How much business is usually done each year? For what periods and purposes are the loans granted? What other kinds of co-operative societies are operating in the locality?

B. PREPARATION AND SALE OF CROPS (IN VILLAGES)

1. What expenses are incurred in processing the produce? Who performs those functions?

2. When does selling start? Is the whole quantity sold together, or by portions? How long is it stored, and where? What are the conditions of storage? How much is kept back for home consumption and as seed reserve? Does it suffice for the whole year? Is it left unsold till the next harvest, or is it sold off to provide funds or for any other reason?

3. Can demands for revenue, rent, interest, and the principal, be met without selling the produce? How are the domestic needs met if the produce is not sold soon after harvesting?

4. To whom is it sold? Are any advances taken from *banias*, *bcoparis*, *arhtias*, *thekedars*, or others? What are their terms? What prices are paid by them? How are the rates calculated; are they related to the prices prevailing in the *mandis*? What weights and measures are employed? Do creditors and landlords put any pressure on the growers in order to buy the produce? If so, what prices do they offer?

5. What proportion is sold in the villages, small local *mandis* and the town and wholesale markets? Through whom do these sales take place? Do the growers possess any knowledge about the *mandis*?

6. What are the present means of communication and transportation? How much does it cost to move the goods? How much can the different animals carry or draw? How many people own means of transport. Which method of transport is most popular?

C. CONDITIONS IN THE MANDIS

1. What facilities are available for the storage of the produce, and on what terms? Is any cleaning and grading done? Are there any alternative methods of storing? If so, give the respective merits of the various forms of storage?

2. What municipal taxes and market charges are to be paid by sellers—both cultivators and *beoparis*?

3. How are the transactions effected? Are the interests of the peasants properly protected? How many middlemen operate in the market? Are they fair in their dealings? Are there any *dalals* in the *mandi*? For whom do they work?

4. Do the merchants finance the cultivation and marketing of agricultural commodities? If so, how and on what terms? And where do they get funds from? What is the number of joint-stock banks in the *mandi*?

5. What is the number of "organized" and "unorganized" *mandis* in your area? What Chambers of Commerce or Companies have been established? How do they regulate "futures"? Is membership open to all *arhtias* and *dalals* alike? If not, what other organizations are to be found?

6. What are the existing communications with the outside world? What is the extent of inter-provincial and export trade?

D. MISCELLANEOUS

1. Are there any Co-operative Commission Shops or Sale Societies? What is the present membership? What is their financial position? How much do they charge for each transaction? Can non-members also sell through them; if so, on what terms? Are any dividends declared?

2. What was the result of the operations of the grain elevator at Lyallpur? What led to its failure? What is the opinion of the public—favourable or not? Which will be more suitable, elevators or public godowns?

APPENDIX B

VALUE OF AGRICULTURAL PRODUCTION (1924-25 to 1933-34)

EXPLANATORY NOTES

1. (a) Harvest prices¹ have been adopted all along.
(b) Jute figures refer to calendar years, beginning with 1924; the rest are for crop years.
2. Originally the amount of production² was in tons—except jute and cotton (in 400-lb. bales)—and the prices were quoted per maund, but now all have been converted into tons.
3. (a) Punjab cotton prices³ are the average of American and indigenous unginned cotton prices: this had to be done because separate amounts produced of each variety were not mentioned in the returns.
(b) Separate prices were not quoted for the United Provinces cotton. Therefore the Punjab indigenous cotton prices have been adopted.
(c) Punjab and United Provinces cotton prices previous to 1928-29 have been estimated on the basis of unweighted index numbers of average prices for corresponding years: actual harvest prices were not obtainable for the period before 1928.
(d) Prices of Bombay cotton are for "cleaned" cotton.
4. There were no quotations for the United Provinces sugar; the average prices of the Punjab and Bihar and Orissa have, therefore, been adopted.
- (b) The returns of the production and prices of cane are for raw sugar.
5. The two millets (*jowar* and *bajra*) have been treated as one; the amounts of production have been added and the prices have been averaged.
6. Oilseeds have been completely omitted for reasons mentioned in Chapter IV *supra*, as also other minor crops.

¹ *Agricultural Statistics of India*, vol. i, 1924-25 to 1933-34.

² *Estimates of Area and Yield of Principal Crops in India*, 1924-25 to 1933-34.

³ *Index Numbers of Prices*, 1861-1931.

1924-25

Provinces	Crops	Amount in 1,000 tons	Harvest Price per ton, Rs.	Value of Production (Rs.)	Index Number
Bengal ..	Jute	1,280	326-6	417,698,000	100
	Rice	7,711	175-2	1,350,388,875	
	Cane	210	258-6	54,258,750	
	Total			1,822,345,625	
Bihar and Orissa	Cane	252	219-5	55,266,750	100
	Rice	6,023	141-2	849,995,875	
	Wheat	473	173-6	81,946,375	
	Barley	531	107-2	56,883,375	
	Maize	260	111-9	29,006,250	
	Jute	87	306-0	26,622,000	
	Total			1,099,720,625	
United Provinces	Rice	2,275	205-11	467,939,062	100
	Wheat	2,419	154-11	374,189,062	
	Barley	1,751	98-9	172,582,937	
	Milletts	741	95-3	70,533,937	
	Maize	533	91-13	48,936,062	
	Cane	1,056	193-12	204,600,000	
	Cotton	49	289-0	14,161,000	
	Total			1,352,942,060	
Punjab ..	Wheat	2,581	136-0	351,016,000	100
	Milletts	477	88-6	42,154,875	
	Maize	336	90-2	30,282,000	
	Cane	330	168-5	55,643,125	
	Cotton	142	329-12	46,824,500	
	Total			525,920,500	
Bombay ..	Rice	1,396	222-11	310,871,750	100
	Wheat	378	207-6	78,387,750	
	Milletts	2,444	137-11	336,408,250	
	Cotton	184	1,235-14	227,401,000	
	Total			953,068,750	

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1925-26

Provinces	Crops	Amount in 1,000 tons	Harvest Price per ton, Rs.	Value of Production (Rs.)	Index Number
Bengal ..	Jute	1,418	511-11	725,572,875	129
	Rice	8,218	190-6	1,564,501,750	
	Cane	245	272-0	66,640,000	
	Total			2,356,714,625	
Bihar and Orissa	Cane	318	210-12	67,018,500	96
	Rice	4,889	153-0	748,017,000	
	Wheat	427	173-6	74,031,125	
	Barley	512	103-11	53,088,000	
	Maize	499	103-11	51,740,062	
	Jute	114	504-14	57,555,750	
	Total			1,051,450,437	
United Provinces	Rice	2,160	197-2	425,790,000	103
	Wheat	2,287	149-10	342,192,375	
	Barley	1,733	102-0	176,766,000	
	Milletts	671	139-6	93,520,625	
	Maize	554	108-13	60,282,125	
	Cane	1,412	204-0	288,048,000	
	Cotton	49	223-2	10,933,125	
	Total			1,397,532,250	
Punjab ..	Wheat	2,936	132-10	389,312,000	109
	Milletts	378	127-8	48,195,000	
	Maize	311	124-2	38,602,875	
	Cane	303	195-8	59,236,500	
	Cotton	141	255-0	35,955,000	
	Total			571,301,375	
Bombay ..	Rice	1,269	222-11	282,592,438	87
	Wheat	285	209-2	59,600,625	
	Milletts	2,109	141-2	297,632,625	
	Cotton	187	952-3	179,929,062	
	Total			819,754,750	

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1926-27

Provinces	Crops	Amount in 1,000 tons	Harvest Price per ton, Rs.	Value of Production (Rs.)	Index Number
Bengal ..	Jute	1,900	223-2	439,937,500	105
	Rice	7,355	195-8	1,437,902,500	
	Cane	215	248-4	58,373,750	
	Total			1,920,213,750	
Bihar and Orissa	Cane	303	178-8	54,085,500	98
	Rice	4,788	170-0	813,960,000	
	Wheat	477	171-11	81,894,937	
	Barley	507	108-13	55,167,937	
	Maize	439	111-9	48,975,937	
	Jute	136	183-10	24,975,000	
	Total			1,079,059,311	
United Provinces	Rice	2,341	115-10	270,678,125	93
	Wheat	2,492	141-2	351,684,000	
	Barley	1,699	103-11	176,165,062	
	Millets	969	107-2	103,804,125	
	Maize	660	103-11	67,433,750	
	Cane	1,680	166-10	279,930,000	
	Cotton	46	178-8	8,211,000	
	Total			1,257,906,062	
Punjab ..	Wheat	2,946	122-6	360,516,750	100
	Millets	470	122-6	60,336,250	
	Maize	346	98-9	34,102,625	
	Cane	349	154-11	53,985,937	
	Cotton	93	204-0	18,972,000	
	Total			527,913,562	
Bombay ..	Rice	1,354	223-2	303,111,000	84
	Wheat	318	212-8	67,565,000	
	Millets	2,264	141-2	319,507,000	
	Cotton	134	843-13	112,670,875	
	Total			802,853,875	

1927-28

Provinces	Crops	Amount in 1,000 tons	Harvest Price per ton, Rs.	Value of Production (Rs.)	Index Number
Bengal ..	Jute	1,606	223-2	358,339,876	95
	Rice	6,493	204-0	1,324,572,000	
	Cane	236	241-6	56,964,500	
	Total			1,739,876,376	
Bihar and Orissa	Cane	309	170-0	52,530,000	89
	Rice	4,378	166-10	729,484,250	
	Wheat	418	163-4	68,238,500	
	Barley	460	108-13	50,053,750	
	Maize	514	107-2	55,062,250	
	Jute	119	197-2	23,457,875	
	Total			978,826,625	
United Provinces	Rice	2,183	193-12	422,831,250	94
	Wheat	2,361	139-6	329,064,375	
	Barley	1,306	90-2	117,703,250	
	Millets	958	91-13	87,956,000	
	Maize	777	86-11	67,356,188	
	Cane	1,522	159-13	243,234,625	
	Cotton	35	159-13	5,593,438	
	Total			1,273,739,126	
Punjab ..	Wheat	2,344	115-10	271,026,875	80
	Millets	459	115-10	53,071,875	
	Maize	425	93-8	39,737,500	
	Cane	381	147-15	36,364,125	
	Cotton	92	219-5	20,176,750	
	Total			420,377,125	
Bombay ..	Rice	1,329	217-10	289,223,625	88
	Wheat	395	163-4	64,483,750	
	Millets	2,591	125-12	325,818,250	
	Cotton	175	914-10	160,059,375	
	Total			839,585,000	

1928-29

Provinces	Crops	Amount in 1,000 tons	Harvest Price per ton, Rs	Value of Production (Rs.)	Index Number
Bengal ..	Jute	1,520	244-12	372,020,000	115
	Rice	9,684	180-4	1,745,541,000	
	Cane	216	232-14	50,301,000	
	Total			2,167,862,000	
Bihar and Orissa	Cane	313	175-2	54,814,125	110
	Rice	5,588	170-0	949,960,000	
	Wheat	513	163-4	83,747,250	
	Barley	490	120-11	59,136,875	
	Maize	417	122-6	51,030,312	
	Jute	124	117-10	14,585,500	
	Total			1,213,274,062	
United Provinces	Rice	1,104	200-10	221,490,000	85
	Wheat	2,480	144-8	358,360,000	
	Barley	1,608	111-9	179,392,500	
	Millets	600	156-6	93,825,000	
	Maize	689	124-2	85,522,125	
	Cane	1,210	170-0	205,700,000	
	Cotton	45	170-0	7,650,000	
	Total			1,151,939,625	
Punjab ..	Wheat	3,070	115-10	354,968,750	95
	Millets	337	115-10	38,965,625	
	Maize	347	125-12	43,635,250	
	Cane	289	163-3	47,160,188	
	Cotton	93	232-14	21,663,625	
	Total			506,393,438	
Bombay ..	Rice	1,459	217-10	317,514,875	92
	Wheat	406	195-8	79,373,000	
	Millets	2,463	129-3	318,188,000	
	Cotton	187	850-0	158,950,000	
	Total			874,025,875	

1929-30

Provinces	Crops	Amount in 1,000 tons	Harvest Price per ton, Rs.	Value of Production (Rs.)	Index Number
Bengal ..	Jute	1,641	217-10	357,122,625	96
	Rice	8,202	163-3	1,338,463,875	
	Cane	220	215-14	47,492,500	
	Total			1,743,079,000	
Bihar and Orissa	Cane	304	178-8	54,264,000	99
	Rice	6,011	137-11	827,639,562	
	Wheat	515	136-0	70,040,000	
	Barley	517	95-3	49,211,938	
	Maize	594	95-3	56,541,375	
	Jute	128	219-5	28,072,000	
	Total			1,085,768,875	
United Provinces	Rice	1,523	190-6	289,941,125	87
	Wheat	3,309	105-6	348,685,625	
	Barley	1,371	76-8	104,881,500	
	Millets	1,009	113-14	114,899,875	
	Maize	914	105-6	96,312,750	
	Cane	1,301	171-11	223,363,437	
	Cotton	51	188-11	9,623,062	
	Total			1,187,707,374	
Punjab ..	Wheat	3,781	81-10	306,497,312	84
	Millets	372	108-13	40,478,250	
	Maize	397	93-8	37,119,000	
	Cane	204	164-14	33,634,500	
	Cotton	125	210-12	26,343,750	
	Total			444,072,812	
Bombay ..	Rice	1,283	158-1	220,794,188	74
	Wheat	430	158-1	67,966,875	
	Millets	2,256	141-2	318,378,000	
	Cotton	141	710-1	100,118,812	
	Total			707,257,875	

1930-31

Provinces	Crops	Amount in 1,000 tons	Harvest Price per ton, Rs.	Value of Production (Rs.)	Index Number
Bengal ..	Jute	1,765	96-14	170,984,375	65
	Rice	9,206	107-2	986,192,750	
	Cane	248	146-4	36,270,000	
			Total	1,193,447,125	
Bihar and Orissa	Cane	307	108-13	33,405,312	66
	Rice	5,615	90-2	568,768,750	
	Wheat	454	96-14	43,981,250	
	Barley	533	61-3	32,612,937	
	Maize	521	61-3	31,878,687	
	Jute	111	91-13	9,273,062	
			Total	719,919,998	
United Provinces	Rice	1,704	139-6	237,695,000	55
	Wheat	2,686	62-14	168,882,250	
	Barley	1,575	40-13	64,279,687	
	Milletts	936	47-10	44,514,500	
	Maize	933	49-5	46,008,562	
	Cane	1,581	108-13	172,032,562	
	Cotton	57	119-0	6,783,000	
			Total	740,195,561	
Punjab ..	Wheat	3,122	42-8	132,685,000	47
	Millers	509	47-10	24,241,125	
	Maize	412	40-13	16,814,375	
	Cane	302	108-13	32,861,375	
	Cotton	119	134-5	39,783,187	
			Total	246,385,062	
Bombay ..	Rice	1,410	111-9	157,303,125	52
	Wheat	441	111-9	49,199,062	
	Milletts	2,571	85-0	218,535,000	
	Cotton	124	542-5	67,246,750	
			Total	492,283,937	

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1931-32

Provinces	Crops	Amount in 1,000 tons	Harvest Price per ton, Rs.	Value of Production (Rs.)	Index Number
Bengal ..	Jute	890	115-10	102,906,250	52
	Rice	9,493	85-0	806,905,000	
	Cane	273	134-5	36,667,312	
	Total			946,478,562	
Bihar and Orissa	Cane	307	96-14	29,740,625	56
	Rice	5,738	81-10	468,364,250	
	Wheat	469	95-3	44,642,938	
	Barley	514	61-3	31,544,312	
	Maize	523	61-3	32,099,125	
	Jute	61	122-6	7,464,875	
	Total			613,856,125	
United Provinces	Rice	1,989	108-13	216,428,061	57
	Wheat	2,610	69-11	181,884,375	
	Barley	1,607	49-5	79,245,187	
	Millets	869	52-11	45,785,438	
	Maize	833	42-8	35,402,500	
	Cane	2,207	105-0	231,735,000	
	Cotton	37	137-11	5,094,438	
	Total			795,574,999	
Punjab ..	Wheat	2,760	56-3	156,077,500	47
	Millets	556	42-8	23,630,000	
	Maize	380	37-6	14,202,500	
	Cane	368	103-11	38,157,000	
	Cotton	96	159-13	15,341,900	
	Total			247,408,900	
Bombay ..	Rice	1,427	98-9	140,653,062	42
	Wheat	444	98-9	43,761,750	
	Millets	2,234	62-14	140,462,750	
	Cotton	130	544-0	70,720,000	
	Total			395,597,562	

1932-33

Provinces	Crops	Amount in 1,000 tons	Harvest Price per ton, Rs.	Value of Production (Rs.)	Index Number
Bengal ..	Jute	1,101	95-3	104,801,000	42
	Rice	9,364	66-5	620,950,000	
	Cane	454	101-0	45,854,000	
	Total			771,605,000	
Bihar and Orissa	Cane	313	79-14	24,000,000	43
	Rice	4,201	79-14	335,555,000	
	Wheat	492	95-3	46,832,000	
	Barley	560	59-8	33,320,000	
	Maize	562	54-6	30,559,000	
	Jute	93	85-0	7,880,000	
	Total			478,146,000	
United Provinces	Rice	1,327	120-11	160,152,000	57
	Wheat	2,713	79-14	216,701,000	
	Barley	1,534	57-13	88,684,000	
	Millets	926	57-13	54,034,000	
	Maize	751	61-13	45,952,000	
	Cane	2,577	76-8	197,141,000	
	Cotton	30	154-1	4,670,000	
	Total			767,334,000	
Punjab ..	Wheat	2,813	74-13	210,448,000	58
	Millets	443	57-13	25,611,000	
	Maize	348	62-14	21,880,000	
	Cane	444	71-6	31,690,000	
	Cotton	99	168-4	16,671,000	
	Total			306,300,000	
Bombay ..	Rice	1,355	130-14	177,342,000	52
	Wheat	602	108-12	65,468,000	
	Millets	2,354	76-8	180,081,000	
	Cotton	156	496-6	77,186,000	
	Total			500,077,000	

1933-34

Provinces	Crops	Amount in 1,000 tons	Harvest Price per ton, Rs.	Value of Production (Rs.)	Index Number
Bengal ..	Jute	1,258	95-5	119,510,000	49
	Rice	8,680	81-11	708,865,000	
	Cane	457	107-3	48,984,687	
	Total			877,360,687	
Bihar Orissa	Cane	623	83-6	51,938,299	44
	Rice	4,294	78-4	336,650,000	
	Wheat	476	86-12	41,148,235	
	Barley	460	56-2	25,827,083	
	Maize	449	54-7	24,445,555	
	Jute	80	88-7	7,075,000	
	Total			487,084,172	
United Provinces	Rice	1,736	100-6	174,263,014	54
	Wheat	2,537	69-12	176,973,368	
	Barley	1,710	49-5	84,371,875	
	Milletts	872	47-10	41,541,111	
	Maize	695	49-5	34,291,493	
	Cane	2,532	86-12	219,651,000	
	Cotton	47	114-0	5,358,000	
	Total			736,449,861	
Punjab ..	Wheat	2,794	57-13	161,625,139	48
	Milletts	454	47-10	21,608,667	
	Maize	288	45-15	12,250,000	
	Cane	364	88-7	32,191,250	
	Cotton	166	132-11	21,995,188	
	Total			249,670,244	
Bombay ..	Rice	1,415	120-13	170,950,000	49
	Wheat	685	100-6	68,756,948	
	Milletts	2,208	74-14	165,293,333	
	Cotton	147	445-11	65,516,062	
	Total			470,516,343	

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